The Ebb and Flow of the Pink Tide:

Reformist Development Strategies in Brazil and Argentina

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Abstract

This thesis analyses the achievements and shortcomings of the 'Pink Tide'– the left-of-centre governments elected around the turn of the millennium in Latin America – through a comparative study of Brazil and Argentina. The main argument is that the policies these governments implemented did promote growth and reduce income inequality, but they were incapable of transforming the deeper constraints of the economies: as a result, growth and redistribution led to an accumulation of fragilities that the development strategies could not overcome in the first years of the 2010s. Specifically, higher minimum wages, greater pension coverage and conditional cash transfers, implemented under a permissive international scenario, changed the pattern of demand and initiated a cumulative-causation process that explains key features of growth, income redistribution, and the economies' growing constraints. This cumulative-causation process was based on greater demand for wage-goods and services, the domestic employment of low-skilled labour to produce them, and rising income at the bottom of the distribution. This furthermore constituted a regressive structural change, as the rise of low-productivity service sectors decreased the international competitiveness of the economies, whilst wage gains in these same sectors led to cost-push inflation, endogenously defining the balance-of-payments and the inflation constraints. Therefore, the very success of promoting growth and redistribution along these lines would exhaust itself over a longer period, requiring a different set of policies to raise productivity and attack other causes of inequality – i.e. transitioning to a new pattern of accumulation. The argument is explored empirically with the use of data from national accounts, the composition of exports and imports, the components of inflation, and a class-based decomposition of inequality using household surveys. Comparing the experiences of the two countries, this thesis contributes to the development and inequality literature by indicating that, if reformist development strategies can indeed lead to a pro-poor, equality-driven growth pattern in the short term, embarking on a sustainable path to development requires a transformative approach to economic, distributive and political structures.

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Acronyms and Abbreviations

ANOGI: Analysis of Gini

BPC: *Benefício de Prestação Continuada*

BNDES: *Banco Nacional de Desenvolvimento Econômico e Social*

CCT: Conditional Cash Transfer

CGT: *Confederación General del Trabajo de la República Argentina*

CGT: *Confederación General del Trabajo de la República Argentina*

EGP: Erikson-Goldthorpe-Portocarero

ENGH: *Encuesta Nacional de Gastos de los Hogares*

EPH-C: *Encuesta Permanente de Hogares Continua*

EPH: *Encuesta Permanente de Hogares*

FIESP: *Federação das Indústrias do Estado de São Paulo*

FDI: Foreign Direct Investment

GDP: gross domestic product

GOS: Gross Operating Surplus

INDEC: Instituto Nacional de Estadística y Censos

MW: Minimum Wage

OECD: Organisation for Economic Co-operation and Development

PAC: *Programa de Aceleração do Crescimento*

PBF: *Programa Bolsa Família*

PBM: *Programa Brasil Maior*

PDP: *Política de Desenvolvimento Produtivo*

PITCE: *Política Industrial, Tecnológica e de Comércio Exterior*

PJ: *Partido Justicialista*

PJyJHD: *Plan Jefes y Jefas de Hogar Desocupado*

PNAD: *Pesquisa Nacional por Amostra de Domicílios*

PSI: *Programa de Sustentação do Investimento*

PT: *Partido dos Trabalhadores*

SEDLAC: Socio-Economic Database for Latin America and the Caribbean

SOE: State-Owned Enterpreise

VA: Value-Added

WENAO: Western Europe, North America and Oceania

Introduction

At the end of a long period of developmental regimes, roughly between 1930 and 1980, Latin America became the world's laboratory for an emerging neoliberalism, pioneering transitions in Chile and Argentina in the early and mid-1970s. This soon spread to most of the continent and, alongside a crisis-ridden decade of the 1980s, Latin America underwent the most thorough neoliberal transformation in the world at that time (Sader 2011). Countries across the region promoted radical trade and financial liberalisation, cut the already small welfare entitlements and privatised state assets, whilst firms integrated themselves into low value-added sections of global value chains (Medeiros 2009, 2011, Saad-Filho 2010). What resulted was an unstable, low-growth model heavily dependent on foreign direct investment (FDI) and speculative inflows of foreign capital: the annual growth rate of Latin America and the Caribbean was on average 5.8% per year (and never below 2.4%) between 1961 and 1980, and dropped to 2.5% between 1981 and 2000, with several years of negative or near-zero growth.[1] The social record did not fare better, with rising unemployment, labour market informality, poverty and inequality. Illustratively, the simple country-average of the Gini index of household per capita income in Latin America increased by about 0.05 – approximately 10% – between the early 1980s and 2000 (Cornia 2012), and the number of people under the poverty line in the continent grew by 47,000,000 from 1981 until 1999.[2]

Towards the end of the 1990s, popular approval of neoliberal governments fell, social struggles mounted and, starting with Venezuela in 1998, many countries elected presidents running on platforms that were allegedly against neoliberalism. This continental movement, known as the 'Pink Tide', made use of exceptionally favourable global conditions to drive

[1] Annual GDP growth rate of the whole Latin America and the Caribbean region, data from the World Bank.

[2] Poverty defined as the headcount living under US$ 4.00 per day (2011 PPP conversion), data from the World Bank (PovcalNet platform). Data for inequality are taken from the All the Ginis database and the World Bank. The details are explained in Table 1.3 and Figure 1.1 in chapter 1.

social gains. Relatively fast growth rates in core countries, Chinese demand for primary commodities, and abundant international liquidity jointly benefitted low- and middle-income economies (Medeiros and Cintra 2015, Saad-Filho 2013). Left-leaning Latin American governments capitalised on this moment to implement economic planning initiatives and novel welfare policies, such as conditional cash transfers (CCTs), financed through the receipts of economic growth and the taxation of rising commodity exports. Under a changed economic and social policy mix, GDP growth rates picked up and social conditions improved, partially reversing the adverse consequences of neoliberalism and cementing popular support for the Pink Tide administrations. The GDP per capita of Latin America and the Caribbean rose by 31% between 2003 and 2013, poverty rates fell from 32 to 17%, and the simple country-average of the Gini index of household per capita income in Latin America fell by 0.06.[3]

In Brazil, the Pink Tide was represented by the governments of the Workers' Party (*Partido dos Trabalhadores*, PT) between 2003 and 2016, and in Argentina by the governments of the Justicialist Party (*Partido Justicialista*, PJ), the largest Peronist party in the country, between 2003 and 2015.[4] The PT and PJ governments, at least until the first years of the 2010s, also oversaw a substantial process of inclusive growth. In Brazil, illustratively, GDP per capita grew from US$ 11,559 per year in 2002 to US$ 15,432 in 2013, the poverty rate fell from 29.3 to 11.9%, and the Gini coefficient of household per capita income fell from 0.581 to 0.528.[5] Argentina presented even more compelling indicators, as GDP per capita grew from US$ 12,412 per year in 2002 to US$ 19,629 in 2013, the poverty rate fell from 32.5 to 3.9%, and the Gini coefficient fell from 0.538 to 0.410. At least for some years, Brazil, Argentina and other Latin American countries ruled by leftist parties seemed to be on a promising path to development.

The Pink Tide would soon ebb in the second decade of the 21st century, however, in a spiral of economic and political crises. As international conditions deteriorated, the governments faced tougher distributional choices and, in this scenario, did not continue to secure social and distributional improvements. GDP per capita declined by about 2% between 2013 and 2016, whilst inequality stagnated or decreased at a much slower pace. Slow or negative growth and meagre distributional results, combined with allegations of

[3] All data from the World Bank, see Table 1.3 and Figure 1.1 in chapter 1 for details of inequality data. GDP per capita in constant 2010 US dollars.

[4] In Brazil, Luis Inácio Lula da Silva (2003-2010) and Dilma Rousseff (2011-2016) were in power, whilst in Argentina, after a provisional government of Eduardo Duhalde (2002-2003), the two elected presidents were Néstor Kichner (2003-2007) and Cristina Fernández de Kirchner (2007-2015).

[5] All data from the World Bank (inequality and poverty from the PovcalNet platform). GDP per capita in constant 2011 dollars (2011 PPP conversion rates). Inequality data collected from PovcalNet differs slightly from other databases, but for the purposes at hand the difference is irrelevant.

corruption and the repression of worker and indigenous struggles, alienated important constituencies, and a growing sense of disillusionment took hold across the region. Several left-of-centre governments have thus been, legally or not, ousted from power since the 2009 Honduran military coup against Manuel Zelaya, including the 2015 right-wing victory of Mauricio Macri in Argentina and the 2016 parliamentary coup against Dilma Rousseff in Brazil.

In light of the Pink Tide's unravelling, the moment is ripe for an appreciation of the significance of this historical moment and what it entailed. This thesis offers such a contribution by investigating the achievements and the shortcomings of the development strategies that were implemented during the Pink Tide in two of the largest and most important economies of the continent, Brazil and Argentina. More specifically, this thesis interrogates the capacity of these development strategies to drive, over an extended period of time, a more equal distribution of income and improvements in the material and social circumstances of workers. Other social, economic and political phenomena, such as the countries' international trade patterns or the governments' political alliances, are of interest to the extent that they affect the possibility of securing distributive gains, but they are not the end-results with which this research is concerned.

Explaining how the development strategies of the PT and the PJ delivered social and economic gains for about a decade, but were incapable of sustaining a longer and more intense process of redistribution, is relevant in at least four major dimensions. From a global perspective, the widespread decline in inequality in Latin America during the 2000s went against the trends of rich countries and most other nations in the world, where income concentration has generally been on the rise since the 1980s (Cornia 2014a, Lakner and Milanovic 2016, Lustig *et al.* 2013, Milanovic 2002, Simson 2018). At a moment when there is great popular concern surrounding inequality and an urgent search for means to reduce it, understanding the processes that allowed for a sizeable equalisation of income in Brazil and Argentina and what curtailed this redistribution can offer lessons of wide interest, both general and academic.

From a Latin American perspective, Brazil and Argentina were some of the best candidates for a successful developmental take-off during the 2000s (see chapters 3 and 5). They are upper-middle income countries, with a sophisticated productive structure and a highly developed higher education system; they have leading global firms in certain sectors; and their size gives them strong regional economic relevance. In this sense, Argentina and Brazil are not representative of the challenges and opportunities faced by most Latin American countries – but their failures to embark on a sustained process of development are highly relevant for our understanding of the obstacles that must be overcome in the

region in order to reach an equitable distribution of opportunities and resources, and to achieve sustained, broad-based growth.

Regarding the history of these two countries, the 2000s were the only decade during the past 50 years or more that combined growing GDP per capita and a substantial fall in inequality (this is shown in chapters 4 and 6). In this sense, the PT and the PJ were the only parties in these countries, in several generations, that managed to reach government and try to steer capitalism towards more equal outcomes. Assessing what these parties achieved once at the helm of the state is thus an evaluation of the historic successes and shortcomings of the development strategies of the Brazilian and Argentinean centre-left, of great political relevance.

In wider terms, it is argued throughout the thesis that growth, redistribution and their exhaustion in Brazil and Argentina involved processes and challenges that are relevant to development experiences in general. The governments implemented a variety of social and labour-market policies, such as CCTs, minimum wage (MW) hikes and non-contributory pensions, and they experimented with different macroeconomic frameworks, extending across fiscal and monetary regimes, trade policy and exchange-rate management, as well as different approaches to industrial policy. Furthermore, as growth and redistribution advanced during the 2000s, long-standing challenges to development were brought to the fore: the possible dependence on high international commodity prices to guarantee balance-of-payments sustainability, the deterioration of these countries' productive structure through greater employment in low-skilled services, and rising inflationary pressures were key issues that had to be confronted. Although historical specificities played a role, Brazil's and Argentina's experience during the Pink Tide can thus provide lessons for other countries about how, to what extent, and under which circumstances it is possible to pursue pro-poor, equality-driven growth agendas.

In assessing the development strategies of Brazil and Argentina during the Pink Tide, this thesis seeks, first, to identify the processes, structures and enabling conditions through which destitution and inequality declined. Second, it explores how the distribution of income was reshaped across class lines, identifying changes to these countries' class structures as well as the groups that benefitted and lost the most from the dynamics of accumulation. Third, in light of the Pink Tide's unravelling, this thesis seeks to determine whether the processes that drove distributive gains also created, through their own success, fragilities that jeopardised further improvements in the distribution of income. These three steps allow for a structured exposition of the pattern of accumulation of the countries, identifying the relevant elements that not only promoted growth and redistribution for a limited period, but, it is argued, also gradually tightened constraints that the development

strategies associated with the Pink Tide administrations were unable to overcome. In short, this procedure identifies what drove the decrease in poverty and inequality in Brazil and Argentina in the 2000s, the class character of redistribution, and why further distributive gains under the strategy in place became increasingly unfeasible in the 2010s.

This thesis is structured as follows. After this Introduction, chapter 1 presents an overview of Latin American economies during the last decades, with a focus on identifying the drivers and limits of the growth and redistribution process that took place during the Pink Tide. This overview serves the purpose of contextualising Brazil's and Argentina's experiences, which are later studied in depth, against the wider experience of the continent. To this extent, chapter 1 argues that the Pink Tide governments implemented a series of policies that were indeed important drivers of redistribution – particularly MW hikes, CCTs and their knock-on effects on labour formalisation – but they were incapable of securing the conditions that would allow for a longer or more intense fall of inequality. The continuity of redistribution was jeopardised because of a regressive structural change, i.e. rising employment in low-productivity sectors, and the demobilisation of popular struggles. The regressive structural change and demobilisation respectively led to economic fragilities and disarmed the political forces that could push for progressive changes when difficult distributional choices had to be made.

Chapter 2 presents the methods that later guide the study of Brazil and Argentina. It lays down the procedures used to examine the processes of growth, structural change, and income redistribution, and it proposes an interpretive framework to account for the connections between these three processes. A typology of class positions is developed, which is later applied to data from household surveys in Brazil and Argentina and supports a detailed study of changes to class inequality during the Pink Tide. The chapter then presents the methods used to decompose the Gini index by income-sources and by groups. It engages with the group-wise decomposition known as ANOGI (Analysis of Gini), and develops novel indicators for the impact on total inequality due to changes in the population-share of groups which, itself, is a contribution to the literature. Later in the thesis (chapter 6), it is shown that these novel indicators can help address shortcomings in the literature that has studied the impact of labour formalisation on inequality. Finally, the chapter proposes a cumulative-causation mechanism connecting growth, redistribution and regressive structural change, which is later explored in the empirical study of the Brazilian and Argentinean economies during the PT and PJ governments.

Chapters 3 through 6 have a symmetrical structure, in which chapters 3 and 4 concern Brazil and chapters 5 and 6 concern Argentina. The first chapter of each pair (chapters 3 and 5) outlines the country's pattern of accumulation during the Pink Tide, with a view to

identifying the drivers of growth and structural change, and the evolution of the economy's constraints. This is done, first, by investigating the leading sources of demand, seeking to identify how exogenous drivers of demand (in particular, income-supporting policies and greater demand for the country's exports) and their knock-on effects interacted over time, driving growth and shifting the distribution of income. This feeds into an analysis of the sectoral transformations of the economy, i.e. of how growth both implied and was based on structural change. It is then seen how the nature of the growth process and its sectoral dynamics pressured the balance-of-payments and inflation. To do so, changes to the country's pattern of international trade are analysed, investigating the evolution of the technological composition of exports and the dynamics of imports, with implications drawn for the capacity to sustain fast growth rates without incurring in balance-of-payments crises. Finally, the chapters investigate whether the policy framework was, in principle, able to control inflation without sacrificing growth, income redistribution and balance-of-payments solvency.

The second chapter for each country (chapters 4 and 6) then analyses in greater detail the distribution of income and how it evolved, exploring its class character and identifying the central drivers of falling inequality. The distributional results build upon and are interpreted in light of those of the previous stage, namely changes to the productive structure of the economies, the policy context, and the overall dynamics of accumulation. First, inequality is decomposed by income-sources, highlighting how key social and labour-market policies (especially MW hikes, CCTs and changes to pensions) affected the reproduction of households along the distribution of income. The ANOGI decomposition is then applied, with households classified according to the typology of class positions developed in chapter 2. This step reveals how inequality was restructured along class lines during the Pink Tide, identifies the main 'winners' and 'losers' of the pattern of accumulation, and locates the main drivers of falling inequality. The results of chapters 4 and 6, interpreted in connection to those of chapters 3 and 5, lead to an assessment of the capacity of the development strategies in place to redistribute income and reduce destitution over a longer period of time.

To advance some of the results, it is found that in Brazil and Argentina there was a cumulative-causation process that explains key features of growth and redistribution during the PT and PJ governments, as well as the growing fragilities of these economies in the 2010s. Government transfers and MW hikes increased the income of households at the bottom of the distribution, which raised the demand for wage-goods and services and led to greater output and employment in the sectors that produced such goods. As these sectors were intensive in low-skilled labour, this heated up the low-paid segments of the

labour market and thus reduced inequality through wage gains, also sustaining the process through a further increase of the demand for wage-goods. This also meant, however, that the economies' productive structure gravitated towards labour-intensive, low-productivity sectors, particularly services, which deteriorated their countries' international insertion and led to cost-push inflationary pressures. As a result, the very process behind growth and redistribution endogenously tightened these economies' constraints, requiring countervailing measures in order to sustain accumulation and redistribution over a longer period of time. It is shown that the policy frameworks in place were incapable of producing such countervailing measures, with the result that the PT's and the PJ's development strategies became increasingly ineffective.

Chapter 7 concludes this thesis. It contrasts the experiences of Brazil and Argentina under the Pink Tide and draws the relevant implications for contemporary development strategies in Latin America. It also reflects on avenues for further research, particularly investigating more closely the political processes that enabled and constrained the strategies of Pink Tide governments, exploring the gendered and racialised dimensions of the restructuring of class inequality that occurred, and studying how multidimensional inequality evolved during the Pink Tide.

1

Reformism, class conciliation and the Pink Tide: material gains and their limits

1.1. Introduction

As argued in the Introduction to this thesis, there was a substantial process of growth and income redistribution in Latin America during the Pink Tide governments, including during the PT governments in Brazil and the PJ governments in Argentina. This chapter discusses the economic and political trends that prevailed in the continent during the Pink Tide, with the goal of offering a general interpretive framework that is later used to situate and compare the cases of Brazil and Argentina. To do so, this chapter reviews the changes to the productive structure of the economies since the 2000s, the new matrix of social policies Pink Tide governments implemented, and the political strategies carried out to keep these governments in power. These three dimensions can be respectively synthesised as the renewed dependence on the export of primary commodities; the rise of CCTs as the main form of social safety nets, alongside rising real MWs; and the establishment of broad electoral fronts and a neo-corporatist pattern of class relations, which is to say, a state-centred mediation of capital-labour-social movements relations.

This chapter argues that the development strategies the Pink Tide governments implemented have indeed *promoted* changes that economically benefitted the working classes of their countries, but have done so through a process that deteriorated the productive structure of the economies and demobilised popular organisations, with the result that these strategies could not secure the *sustainability* of income redistribution over a longer period of time. As explored below, the very processes that led to better standards of living reinforced a precarious international insertion of the countries, as they furthered the dependence on commodity exports and produced a regressive structural change. Politically, the governments' strategies demobilised the working classes and social movements through a pragmatic, class-conciliatory approach, combined to the repression of independent struggles. Therefore, these improvements in material conditions for the population were not accompanied by self-reinforcing economic and political conditions, but rather by an increased likelihood of any situation of crisis being 'solved' via an exclusionary shift in policies or government. In broad terms, the forces behind the Pink Tide governments advanced an 'inconsequential' attempt at counter-hegemony, which relied too much on short-term factors and did not transform the state and the economy in ways that would progressively establish structural conditions compatible with popular goals.

The argument can be divided into four elements. First, there were substantial material gains for the working classes and a decrease of income inequality that were in parts due to active government policies, especially MW hikes and CCTs. These material gains were enabled by positive international economic conditions, but not directly caused by them. Second, to bring about these redistributive trends, the governments i) relied on and promoted a pattern of accumulation that deteriorated the structure of the economies, as it led to a further the dependence on commodity exports and deindustrialisation; and ii) reproduced themselves politically via broad fronts, centrally relying on neo-corporatist class conciliation measures, cash transfers to the most destitute groups and the repression of struggles by groups not aligned to the government, and iii) did not promote far-reaching transformations of the state institutionality, of class relations or of visions about the trajectories development should assume. Third, the regressive structural change of the economy and neo-corporatist class conciliation eroded the sustainability of this process, as they respectively i) cemented a peripheral insertion in the world market and a class structure with a sizeable amount of precarious employment; and ii) disorganised the working classes and social movements, which were then less capable of mounting (extra-institutional) pressure and struggling for better conditions. Finally, it therefore became increasingly likely that, when these social formations faced a crisis, it would not be the progressive elements in these hybrid state forms to be deepened, as the agents capable of

fighting for that had been demobilised. On the contrary, a transformation of state power in an exclusionary direction was to be expected, as indeed has been happening throughout Latin America.

This chapter is organised as follows. Section 1.2 presents the debate on Latin America as a whole. It lays down three interpretative frameworks or visions that frame the later discussion. Section 1.3 reviews the changing productive structure and international insertion of Latin American economies, differentiating between national experiences where possible. This comprised the rising importance of extractive activities and deindustrialisation, in a regressive structural change that led to a re-primarisation of exports – that is, a lower share of manufactured goods in total exports and the rise of low-value-added, unprocessed commodities. Section 1.4 brings forth the class structures associated to this pattern of accumulation and changes to the distribution of income. It is shown that standards of living improved, income inequality fell and labour informality decreased, but the jobs that were created were of low quality, leading to a precarious employment structure. The text then covers the changes to the state form, in two steps. Section 1.5 shows how the Pink Tide governments were neo-corporatist, as they attempted to mediate class relations by bringing them into the state apparatus. The support for domestic capitalists and the dissemination CCTs and MW hikes, which reduced poverty and inequality, are highlighted. Section 1.6 then explores the political underpinnings of this class conciliation process, namely, the incorporation of social movements and class entities into the state and the repression of independent struggles. Section 1.7 summarises and concludes the chapter, underscoring the inherent limits to the pragmatic strategies advanced by the Pink Tide governments and showing how this reflects on the subsequent development of the thesis.

1.2. Between populism, post-neoliberalism and reconstituted neoliberalism: three interpretations of the Pink Tide

The 'Pink Tide' has been the object of much controversy, with interpretations of the economic, social and political record of these governments falling into three broad groups. Some saw in them a reproduction of the patronage and clientelistic political models for which the region has been known (for example, Castañeda 2006, Edwards 2010). Others understand that these governments were committed to deep-rooted political and economic change, perhaps capable of breaking with the region's entrenched patterns of inequality and exclusion (for example, Sader 2011). A third group of scholars (for example, Spronk and Webber 2014, Veltmeyer 2013) were sceptical from the outset of the prospects for popular gains, considering that these governments did not empower the population, but

co-opted social movements and trade union leaders to implement a slightly modified version of neoliberalism. These broad frameworks, their contributions and shortcomings are analysed in turn.

Mainstream analyses tend to be structured around the role that positive international conditions played during the Pink Tide governments (Castañeda 2006, Edwards 2010, Levitsky and Roberts 2011, Murillo *et al.* 2011, Weyland 2011a, Weyland *et al.* 2010). It is pointed out that the commodity boom of the 2000s and high international liquidity raised growth, alleviated the balance-of-payments constraint and raised tax revenues, thereby creating the possibility of extending state expenditures without adverse consequences in the short-term. How these governments reacted to this greater fiscal space is the key dividing line according to this interpretation (Murillo *et al.* 2011, Weyland 2009).

The more or less explicit vision that animates this reading of the Pink Tide is that of the Post-Washington Consensus, seen as the set of good governance practices that ought to be followed to achieve developmental objectives.[6] Hence maintaining balanced budgets and promoting trade and financial openness are seen as 'fundamental market principles' (Weyland 2011b: 74). This interpretation thus reviews approvingly the implementation of CCTs, education reforms and labour training policies, as well as the prudent macroeconomic management of some countries, particularly Chile (Levitsky and Roberts 2011, Weyland *et al.* 2010). The line is drawn at economic policies that distort the allocation of resources by influencing relative prices (such as exchange and price controls), at showing tolerance to inflation or by attempting to implement universal social policies. Weyland's (2011b: 79) criticism of Bolivia is illustrative in this respect: 'Morales has engaged in typical rentier behavior. He has created new spending programs, especially "universal" health insurance and a conditional school grant, and has made old-age protection more generous. Thus, he has incurred permanent expenditure commitments with temporary windfall rents – a frequent temptation in rentier states'.

A second line of reasoning, whilst recognising the limitations of these governments, tended to see in them the best viable option, a post-neoliberal alternative (Hershberg and Rosen 2006, Rodríguez-Garavito *et al.* 2008, Sader 2011, 2013a). The main point, often from a realist geopolitical framework, regarded the independent and multi-lateral foreign policies of Pink Tide governments, which would have allowed for a process of regional development. As Sader (2011: 141) put it, the 'fundamental dividing line is between those countries that have signed free trade treaties with the United States, and those that prioritize processes of regional integration'. These foreign policies were responsible for reducing the US's influence on the region and establishing stronger links between Latin

[6] For a critical discussion of the Post-Washington Consensus, see Fine *et al.* (2001).

American countries, thus forging a regional bloc capable of autonomous development (that is, more independent from the US).

The second focus of this interpretation is a positive reading of the social policies Pink Tide governments implemented (Campello 2013). Authors in this group stress the role of social policies in lifting large swathes of the population from poverty and reducing inequality, going against the trends of the preceding decades and arguably representing a break with neoliberalism (Riesco 2009, Sader 2011). Lastly, these authors also emphasise the state's more active role in the economy, considering that revamped planning capacities and a co-ordination of accumulation to favour 'national interests' could bring about growth and redistribution (Sader 2013a). This would come alongside an alternative vision these governments were promoting, a new form of inclusive development that would prioritise regional integration, poverty eradication and social inclusion (Hershberg and Rosen 2006).

This second interpretation does not deny that the Pink Tide governments had got shortcomings, to be sure. The authors indicate, for example, that core elements of macroeconomic policy inherited from previous governments had not been altered, and were preventing faster development – such as the contractionary fiscal and monetary policy that Brazil implemented during the 2000s (Biancarelli 2014). This interpretation considers, however, that there were no political conditions to overcome the identified shortcomings: the authors mention that there was strong opposition to the Pink Tide from the domestic media, from opposition parties, from the United States government and from other forces, which ultimately prevented the Pink Tide governments to adopt tools that would promote faster development (Sader 2013b). As Sankey and Munck (2016: 356) put it, 'The main constraint on the leftist projects today is the conservative pro-market opposition and their allies, including the Catholic church, the US government and corporations, and the media, which remain very strong and have been actively combatting the electoral turn to the left over the last two decades'. In other words, little attention was paid to how the strategies the Pink Tide governments employed to hold on to the state might have been contradictory or bear self-defeating elements. The consequences of this interpretation would be to explain the removal of these governments from power not due to any process for which they were responsible, but rather to changes of the conjuncture.

Finally, a third line of argument was critical of the Pink Tide governments because, according to this view, they did not promote substantial breaks with neoliberalism or, for different reasons, they disempowered the popular classes – they were a reconstituted form of neoliberalism (Modenesi 2012, Petras and Veltmeyer 2007, Robinson 2008, Spronk and Webber 2014, Veltmeyer 2013, Webber 2017, Webber and Carr 2013). In this vein,

according to this third interpretation the economic reforms implemented by Pink Tide governments were seen as timid changes within an exclusionary pattern of accumulation, offering limited benefits to the popular classes whilst re-composing and better serving the interests of capitalists (Castorina 2014, Oliveira 2010). Riding the wave of the commodity boom of the 2000s, these governments allegedly stimulated a neo-extractivist pattern of accumulation that relied on commodity exports, promoted deindustrialisation, worsened the quality of jobs created, reduced the importance of the domestic market and strongly degraded the environment (Veltmeyer 2013). This interpretation suggests that, with minor tax hikes on extractive activities, the Pink Tide governments were able to distribute some benefits for low-income groups in manners that bypassed or prevent popular organisation. Hence the idea of a neodevelopmental state (Boito Jr and Berringer 2014), which organised the interests of the dominant classes via a more active participation in the circuit of capital, or of a compensatory state (Gudynas 2012), which implemented minimalist social policies financed by extractivism without affecting basic class structures. According to these authors, this process was also marked by the disorganisation and de-mobilisation of the working classes, whose leaders were co-opted into becoming state managers and whose independent struggles were strongly repressed (Bonnet and Piva 2012, Castorina 2013, Oliveira *et al.* 2010). In short, for this third reading the Pink Tide governments were essentially responsible for recomposing capitalist hegemony after moments of crisis.

1.3. The productive structure and regressive structural change: neo-extractivism and deindustrialisation

One of the most salient aspects of the recent economic trends in Latin American countries was their renewed dependence on the extraction of natural resources, particularly the export of primary commodities. This has been variously described as a neo-extractivist pattern of accumulation (Burchardt and Dietz 2014, Féliz 2012, Gudynas 2009, López and Vértiz 2012, Veltmeyer 2013, Webber 2014), a re-primarisation of the structure of exports (Gonçalves *et al.* 2009) or, indeed, a commodities consensus (Katz 2015, Svampa 2013). The central feature this characterisation conveys is that the extraction and export of primary goods became the driving element of capital accumulation in Latin America, in either of the two following ways. The first and most direct way, particularly relevant for small South American countries, was through a direct boost to effective demand, with knock-on effects on employment, growth and public finances. The other channel, of great relevance for larger countries such as Brazil, was by alleviating the balance-of-payments

constraint to growth, thus allowing for domestic stimuli to effective demand without short-term external imbalances. In both cases, it is not implied that extractive exports were the largest element of GDP, but rather that they were the main dynamic force in the economic cycle, either directly or as a key enabling factor.

If the centrality of unprocessed commodity exports was similar to 'old' extractivism, what qualified it as *neo*-extractivism was, in turn, the greater participation of the state in these activities, essentially via tax regimes that captured a varyingly higher parcel of rent, on which social policies were funded (Arsel *et al.* 2016, Gudynas 2012). The precise tax regimes, which affect the capacity of funding social policies, and the reliance on mineral or agricultural exports, which have got different technological content and linkages, are an important differentiation between these experiences. These are, however, differentiations *within* a broad neo-extractive pattern of accumulation.

The currency inflows obtained with commodity exports present both opportunities and risks, which can be analysed under the so-called 'Dutch disease' and the possibilities of avoiding it (Saad-Filho and Weeks 2013). The risks exist insofar as a rapid increase of foreign currency inflows, generally due to higher export prices,[7] might appreciate the domestic currency and thus decrease the competitiveness of the manufacturing sector, forestalling the diversification of the economic base (Bresser-Pereira 2012b, Bresser-Pereira and Rugitsky 2018, Frenkel and Rapetti 2012). Once this boom is over, the economy would find itself in a worse position, given the lower technological content and linkages of producing commodities. This is not, however, a necessary outcome – given appropriate policies, the currency overvaluation can be checked and the resources directed to developmental objectives, including social and industrial policies (Saad-Filho and Weeks 2013, Segal 2011, 2012). The higher growth rates that are possible, due to a relaxed balance-of-payments constraint, are also potentially beneficial. Capital controls, the establishment of sovereign funds and higher taxation of commodity exports are amongst some of the possible mechanisms to prevent the Dutch disease. Natural resource-based booms are thus not a curse, but they do present risks that must be faced via an appropriate set of policies.

There is not much doubt that commodity exports played a key role in Latin American economies during the first years of the 20th century, although understanding their full impact is a more complex issue with mixed signals. Estimations show how the foreign sector drove the growth of Latin American economies between 2002 and 2006, led

[7] It should be noticed that this inflow of reserves can be greatly magnified, or even numerically dominated, by accompanying financial movements that partly speculate on future commodity markets.

by commodity exports (Caldentey and Vernengo 2010).[8] Accordingly, agricultural and extractive commodities rose from 41 to 53% of total Latin American exports between 1999 and 2013, whilst manufactured goods decreased from 58 to 44% (Ray *et al.* 2015: 5).

On the one hand, the currency inflows obtained with commodity exports relaxed the balance-of-payments constraint (particularly during the 2003-2007 period), allowing for higher growths rates than would have been possible otherwise (Ocampo 2007, 2014). With different degrees of intervention in the foreign exchange market, the countries were also able to accumulate a substantial amount of reserves, providing buffers against external volatility: the region's gross international reserves increased from US$ 163 billion in 2001 (ECLAC 2010: 272) to US$ 830 billion in 2013 (ECLAC 2014: 191). States throughout the region have also, to different extents, increased the taxation of such activities, and these resources were central in expanding social policies (Córdoba *et al.* 2018).

On the other hand, changes to the sectoral composition of employment and value-added (presented in Table 1.1 and Table 1.2) show that there was a regressive structural change taking place in Latin American economies. Between 1999 and 2014, the overall direction of change was a shift of employment from manufacturing and agriculture towards services, particularly construction, trade, and financial services. For several countries, the overall shift between these two groups of activities was above 7 pp, and on average it was about 5 pp. In terms of value-added, manufacturing and agriculture decreased, giving way to construction, trade and, especially, mining.[9] The former activities fell on average by 3.9 pp, whilst the latter grew by 6.2 pp. The data also suggest there was a restructuring of agricultural activities, given that their employment-share fell substantially more than their share in value-added, which might have been caused by a mixture of productivity gains and positive price dynamics. Altogether, these data point to a regression in the productive structure of the economies, decreasing their long-term international competitiveness and limiting the availability of good quality jobs, given the increasing weight of services.

[8] In Central America, remittances were the driving factor, which can be conceptualised as an export of labour (Caldentey and Vernengo 2010, Robinson 2008). Brazil was an outlier in terms of its drivers of growth, which were domestic after 2006 (Serrano and Summa 2015), but the commodities boom was still central as it provided reserves that displaced the balance-of-payments constraint to growth.

[9] The data also reveal a decrease of the value-added of 'Financial intermediation, real estate, renting and business activities'. However, given the heterogeneity of these activities, the difficulties of capturing their value in national accounts, and the different treatment that is given to indirectly measured financial intermediation, the results are not reliable and are hard to interpret.

Table 1.1 Changes to the sectoral structure of employment (circa 1999 and 2014), Latin America and selected countries (percentage points)

Country	Years compared	Agric.	Mining	Mfg.	Elec.	Cons.	Trade	Transp.	Fin. serv.	Other serv.	Unspec
Bolivia	1999/2013	-7.6	0.7	-1.4	0.1	0.5	0.1	1.6	2.5	3.1	0.5
Brazil	2002/2014	-5.6	0.0	-1.4	0.1	2.0	1.9	0.8	1.9	0.3	-0.2
Chile	2000/2013	-3.8	1.2	-2.6	-0.3	1.3	4.2	0.4	0.7	-1.3	-0.3
Colombia	1999/2014	-7.1	0.4	-0.5	0.1	1.7	4.9	2.6	3.8	-5.8	-0.1
Costa Rica	1999/2014	-9.0	-0.1	-4.4	0.6	-0.4	3.1	1.2	6.0	3.3	-0.3
Domin. Rep.	2002/2014	-2.2	0.0	-4.4	0.0	0.3	1.4	0.1	0.7	4.0	0.0
Ecuador	2000/2014	-4.1	0.2	-1.5	0.5	1.1	1.0	2.1	1.8	-1.3	0.0
El Salvador	1999/2014	-2.3	0.0	-3.9	0.1	-0.6	4.6	-0.2	1.2	0.9	0.0
Guatemala	2002/2014	-4.2	-0.3	-2.4	-0.2	0.5	4.5	-1.6	0.5	3.2	0.0
Honduras	1999/2013	0.5	0.2	-4.3	0.1	0.6	3.7	1.0	0.9	-2.9	0.1
Mexico	2000/2014	-3.2	0.5	-3.8	-0.5	-0.4	1.2	1.2	6.7	-2.2	0.4
Nicaragua	2001/2009	1.1	-0.1	-0.3	-0.4	-1.1	-0.8	0.4	3.0	-2.3	0.5
Panama	2001/2014	-6.1	0.0	-1.6	0.0	4.8	1.3	0.3	3.9	-2.7	0.0
Paraguay	1999/2014	-7.3	-0.2	-1.2	0.0	1.8	4.8	-0.5	2.1	0.5	0.1
Peru	1999/2014	-6.3	0.6	0.8	-0.2	1.8	1.7	1.2	0.8	-0.4	0.0
Uruguay	2007/2014	-2.9	0.0	-2.4	0.4	1.3	0.2	1.4	1.8	0.0	0.0
Venezuela	1999/2013	-2.8	0.6	-2.5	-0.3	0.7	-1.4	2.4	0.4	2.6	0.1
LA (simple av.)	**1999/2014**	**-2.0**	**0.2**	**-2.4**	**0.1**	**0.9**	**2.1***	**0.4**	**1.8**	**-0.1***	**0.0**
LA (weight. av.)	**1999/2014**	**-5.6**	**0.2**	**-1.3**	**0.3**	**1.8**	*	**1.1**	**3.4**	*	**-0.6**

Notes: Mfg. is manufacturing; Elec. is Electricity, gas and water; Cons. is construction; Transp. is transportation; Fin. serv. is financial services; Other serv. is other services; Unspec. is unspecified. Simple and weighted averages provided by the ECLAC. Data are based on household surveys, and the ECLAC carries harmonisation procedures, hence the information is different from that presented in other chapters for Brazil and Argentina. *: Between 1999 and 2002, the ECLAC carried out an unspecified reclassification of activities from 'trade' to 'other services' in Brazil, which led to a shift of 10 pp. between them. To avoid this statistical artefact, the simple average was recalculated using the data and the base years in the table.

Source: Prepared by the author based on data from ECLAC.

What is more striking, however, was the consistency of these changes across countries. Particularly in terms of the employment structure, very few countries went against the continent-wide trends, as 75% of the country-level changes in sectoral employment-shares had the same sign as the continent-average. In terms of sectoral value-added, 67% of changes followed the broader trend. Manufacturing was the clearest case, which decreased its employment-share in all but one of the 17 countries for which there was data, and its value-added share in all but 2 of the 15 analysed countries. This consistency underscores how, in spite of undeniable differences between the countries, there were forces clearly operating upon the whole continent.

There were two stages to this process of deindustrialisation and regressive structural change. Since its heyday as the manufacturing centre of the global south, during the ISI period, Latin America has lost relative importance in global manufacturing and the share of industrial employment has consistently decreased. First, neoliberalism implied a restructuring of the region's insertion in the world market, dealing an initial blow to

manufacturing. The abandonment of active industrial policies and the trade and financial opening were the main factors behind this (Bogliaccini 2013). What then followed was a 'standing still', defensive policy that perpetuated deindustrialisation and led to the conclusion that, 'as far as manufacturing is concerned, in [Latin America] the three post-1980 decades might well deserve [the "lost decades" label]' (Palma 2010: 38).

Table 1.2 Changes to the sectoral structure of value added (circa 1999 and 2014), selected Latin countries (percentage points)

Country	Years compared	Agric.	Mining	Mfg.	Elec.	Cons.	Trade	Transp.	Fin. int.	Pub. adm., health, others
Argentina	1999/2012	4.3	2.0	1.3	-1.3	0.1	-1.5	-1.0	-5.2	0.5
Bolivia	1999/2014	-2.1	11.5	-2.5	-0.8	-0.0	-1.0	-2.7	-4.8	2.0
Brazil	1999/2014	-0.4	2.1	-3.4	-1.3	0.5	3.6	2.2	-3.8	0.6
Chile	2003/2010	-1.9	11.7	-5.8	0.4	1.0	-0.7	-2.1	-1.0	-0.3
Colombia	2000/2014	-2.8	2.8	-2.5	0.1	5.9	-1.1	0.0	-1.6	-0.9
Costa Rica	1999/2014	-6.7	-0.2	-7.3	0.2	1.0	-3.2	3.0	7.8	5.4
El Salvador	1999/2014	0.1	-0.1	-3.6	0.2	-0.9	2.0	-0.5	-0.4	3.2
Guatemala	2001/2014	-3.7	1.6	-1.3	-0.3	-0.0	6.4	2.1	-3.3	-0.7
Honduras	2000/2014	-2.2	0.4	-3.8	-1.5	-0.8	2.8	-1.2	3.1	5.0
Nicaragua	1999/2014	-1.0	2.4	2.6	1.7	-2.0	-2.4	-2.2	-1.8	-0.6
Panama	2007/2014	-2.4	1.2	-0.8	-1.2	9.3	3.3	-5.4	-2.7	-3.8
Paraguay	1999/2014	4.2	0.1	-3.2	-7.8	3.9	-0.2	-0.0	0.7	2.4
Peru	1999/2012	-1.8	5.1	-1.4	-0.5	1.8	-0.4	1.0	-0.8	-3.1
Uruguay	2005/2014	-2.4	0.2	-3.3	-1.0	4.7	0.6	-3.0	1.6	2.7
Venezuela	1999/2010	1.1	14.2	-5.3	-2.1	-0.2	4.9	-1.7	-7.9	-4.1
LA, mean	*	**-1.2**	**3.7**	**-2.7**	**-1.0**	**1.6**	**0.9**	**-0.8**	**-1.3**	**0.6**
LA, median	*	**-1.9**	**2.0**	**-3.2**	**-0.8**	**0.5**	**-0.2**	**-1.0**	**-1.6**	**0.5**

Notes: Shares of total value added in current domestic prices. * The mean and median were calculated by the author, using the initial and final years listed above. The full description of the sectors is: Agriculture, hunting, forestry and fishing; Mining and quarrying; Manufacturing; Electricity, gas and water supply; Construction; Wholesale and retail trade, repair of goods, and hotels and restaurants; Transport, storage and communications; Financial intermediation, real estate, renting and business activities; Public administration, defence, compulsory social security, education, health and social work, and other community, social and personal service activities. The base years of the national accounts used for each country are: Argentina: 1993; Bolivia: 1990; Brazil: 2010; Chile: 2003; Colombia: 2005; Costa Rica: 2012; El Salvador: 1990; Guatemala: 2001; Honduras: 2000; Nicaragua: 2006; Panama: 2007; Paraguay: 1994; Peru: 1994; Uruguay: 2005; Venezuela: 1997. Due to harmonisation procedures the ECLAC carries out, the information is different from that presented in other chapters for Brazil and Argentina.

Source: Prepared by the author based on data from ECLAC.

During the 2000s, deindustrialisation was then furthered by keeping overvalued exchange rates, as there is strong evidence that, with few exceptions such as Argentina, the region's currencies were overvalued during the decade (Frenkel and Rapetti 2012). This suggests that measures to neutralise the Dutch disease, if existent in some cases, were mostly insufficient. Hence, the turn to neo-extractivism contributed to an already existent and ongoing process of deindustrialisation (Bogliaccini 2013, Brady *et al.* 2011, Bresser-Pereira 2011, Ocampo 2014, Palma 2010). The region has, moreover, also been

specialising in less competitive manufacturing sectors (CEPAL 2007, Cimoli *et al.* 2010). Consequently, whilst the Pink Tide governments cannot be held responsible for *initiating* deindustrialisation, their rule *deepened* it due to the reliance on a neo-extractivist pattern of accumulation, without sufficient measures to counteract the Dutch disease or the implementation of active industrial policies.[10]

In sum, by directly boosting growth or by providing foreign currency that alleviated the balance-of-payments constraint, the commodity boom played a key role in shaping the pattern of accumulation throughout Latin American countries. As is later discussed in more depth for the case of Brazil and Argentina, there were several mediations to this process, which consequently operated through different channels and with different intensities. Besides specificities based on each country's structure and the policy choices that were made, however, there were fairly clear general trends. These comprised, on the one hand, a relaxed balance-of-payments, the accumulation of foreign reserves and greater state revenues, which were used to fund social policies. On the other hand, the process also had negative environmental consequences, spurred deindustrialisation, decreased the availability of good-quality jobs and hence heightened the economies' medium-term external vulnerability. The chapter now explores how this reflects on changing class structures, employment patterns and the standards of living of the population.

1.4. Class structures and standards of living under the Pink Tide

Inequality in Latin America rose substantially between 1980 and 2000, as can be seen in Table 1.3 and Figure 1.1. During this period, household per capita income inequality increased in 12 of the 16 countries for which there was data available, with which the simple average of the countries' Gini index rose by 0.046 and the median rose by 0.077 between 1980 and 2000. The characteristics of this hike in inequality, occurring as it did amidst near-stagnant GDP per capita, unsurprisingly led to higher poverty: there were 47,000,000 more people under the poverty line in 1999 as compared to 1981, and 23,000,000 more under the extreme poverty line (the population rates increased from

[10] On the sub-national level, the results of neo-extractivism were more clearly negative. On a local scale, the communities directly affected by extractive projects were subjected to environmental degradation and a destabilisation of their social reproduction, given that very few benefits spilled over (Arsel 2012, Gudynas 2009, Veltmeyer 2013). This heightened the spatial inequality of accumulation and sponsored processes of accumulation by dispossession, in which transnational companies, guarded by state power, continuously advanced over natural resources (Vergara-Camus and Kay 2017). This amounted to the expanded commodification of nature and the forced proletarianisation of small farmers and whatever peasantry there still was (Webber 2014).

33.9% to 34.3%, and from 12.8% to 13.5%, respectively).[11] Associated to these results, there were five trends that dominated the evolution of class structures in Latin America during this period: greater structural unemployment; the rise of foreign emigration and the ensuing dependence of numerous households on remittances; the growth of labour market informality, also as precarious self-employment and micro-entrepreneurialism; deregulation of the labour market; and feminisation of labour (Cornia 2012, Portes and Hoffman 2003, Robinson 2008).

Table 1.3 Household per capita income inequality in Latin America and selected countries (Gini coefficient), 1980-2015

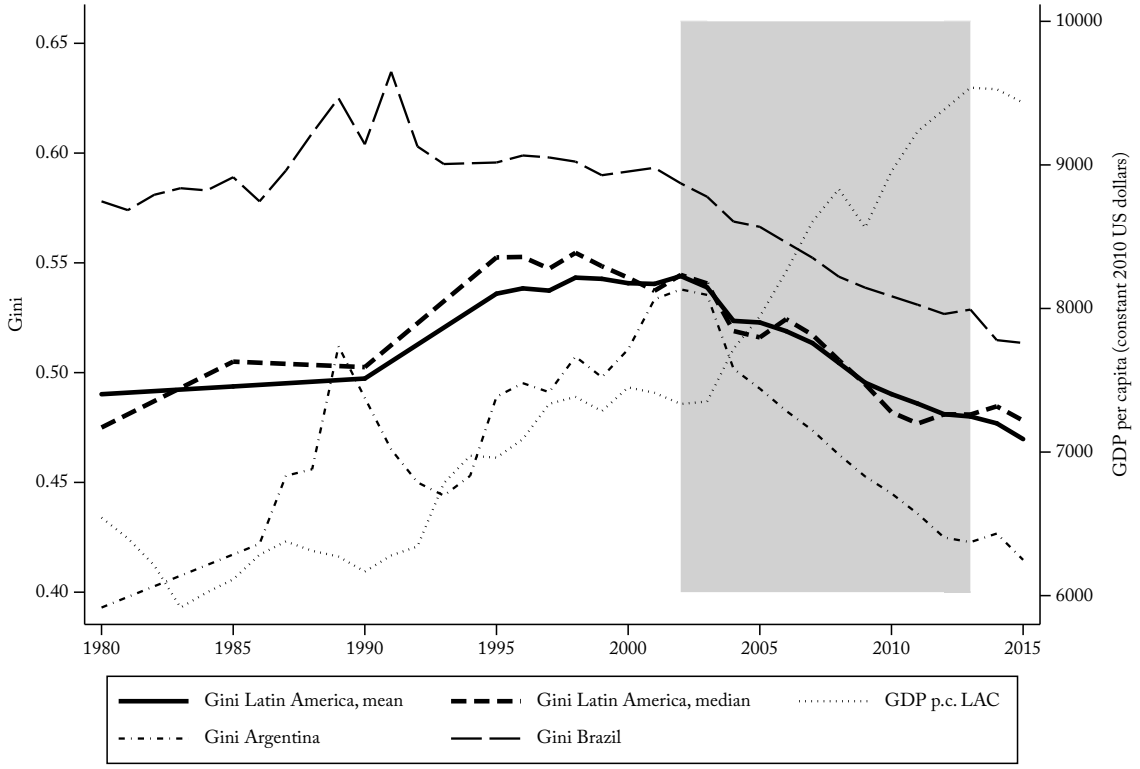
Country	1980	1985	1990	1995	2000	2005	2010	2015
Argentina	0.393	0.422	0.488	0.489	0.511	0.493	0.445	0.415
Bolivia			0.420	0.555	0.630	0.585	0.480	0.458
Brazil	0.578	0.589	0.604	0.596	0.592	0.566	0.535	0.513
Chile	0.532	0.549	0.548	0.549	0.528	0.482	0.483	0.477
Colombia	0.547		0.567	0.575	0.587	0.550	0.555	0.511
Costa Rica	0.463	0.344	0.440	0.457	0.474	0.478	0.481	0.482
Ecuador		0.505	0.420	0.543	0.564	0.541	0.493	0.465
El Salvador			0.502	0.499	0.513	0.479	0.445	0.407
Guatemala	0.407	0.580	0.576		0.548	0.549	0.523	0.487
Honduras			0.574	0.555	0.547	0.595	0.534	0.501
Mexico		0.484	0.524	0.550	0.539	0.511	0.475	0.485
Nicaragua				0.563	0.531	0.492	0.442	0.466
Panama	0.475		0.553	0.578	0.577	0.540	0.519	0.510
Paraguay			0.389	0.582	0.547	0.514	0.518	0.480
Peru	0.580	0.456	0.430	0.483	0.508	0.518	0.462	0.443
Uruguay	0.437		0.424			0.472	0.453	0.417
LA, simple mean	**0.490**	**0.494**	**0.497**	**0.536**	**0.541**	**0.523**	**0.490**	**0.470**
LA, median	**0.475**	**0.505**	**0.503**	**0.552**	**0.543**	**0.516**	**0.482**	**0.478**
	from earliest data until 2000					from 2000 until 2015		
Direction of change			↑: 12*			↑: 01		
			↓: 04*			↓: 15		

Notes: The years in some cases are approximations. When there was no data available for the precise year, the simple average of the two or four closest available dates were used (e.g. the 1999 and 2001 average for the year 2000, or, when data for these two other years were also unavailable, the 1998-2002 average). The values presented differ slightly from those used in subsequent chapters for Brazil and Argentina, given harmonisation procedures implemented in the databases, but there is no substantial difference, particularly when trends are considered. For a review of international inequality databases, see Ferreira *et al.* (2015). *: Of the four countries that did not increase the levels of inequality between the earliest available date and 2000, Nicaragua only has data since 1995 and income became more concentrated in Peru between 1990 and 2005, although not to the extent that could offset the fall between 1980 and 1990.

Source: Prepared by the author based on data from the All the Ginis database, until 1994, and on data from PovcalNet (World Bank), from 1995 until 2015.

[11] GDP per capita, in PPP (2005 international dollars), rose by 8.8% between 1980 and 2000 for Latin America and the Caribbean (World Bank). Poverty data from the World Bank, using US$ 4.00 per day as the poverty line and US$ 1.90 as the extreme poverty line, in both cases with 2011 PPP conversion factors.

Figure 1.1 Household per capita income inequality and GDP per capita in Latin America, Brazil and Argentina, 1980-2015



Notes: Shaded area highlights the growth and redistribution episode between 2003 and 2015. The mean and median for inequality in Latin America include the following countries, first introduced in the noted years: 1980: Argentina, Brazil, Chile, Colombia, Costa Rica, Guatemala, Panama, Peru, Uruguay; 1985: Ecuador, Mexico; 1990: Bolivia, El Salvador, Honduras, Paraguay; 1995: Nicaragua. The trends are very similar if only the initial countries are maintained. See notes to Table 1.3.

Source: Prepared by the author based on inequality data from the All the Ginis database, until 1994, and on data from PovcalNet (World Bank), from 1995 until 2015. GDP per capita taken from the World Bank.

After the turn of the century, but particularly between 2003 and 2013, there was a reversal of these trends as an episode of growth and redistribution took place. Despite repeated scepticism about the redistributive potential of left-of-centre governments (e.g. Robinson 2008, Spronk and Webber 2014, Webber 2014), evidence does indicate that poverty, labour income inequality and informality decreased in Latin America during the 2000s (Cornia 2014a, Keifman and Maurizio 2014, Lopez-Calva and Lustig 2010, Lustig *et al.* 2013). As shown in Table 1.3 and Figure 1.1, inequality fell in 15 of the 16 analysed countries from 2000 until 2015, with a mean and median decrease of the Gini index of about 0.07. The period of strongest redistribution was between 2003 and 2013, when the GDP per capita of Latin America and the Caribbean rose by 31% and poverty and extreme poverty fell, respectively, from 32.4 to 16.7% and from 11.7 to 4.5% of the population. Meanwhile, informality (defined as having the right to a pension upon retirement) decreased approximately 9 pp during the 2000s (ILO 2013: 115), a striking difference from the beginnings of the preceding decade, when 80% of the jobs created were in the informal sector (ILO 2013: 45). Finally, the population-weighted average

of real minimum wages increased by 54% between 2000 and 2012 (ILO 2013: 127), reversing the effects of the previous decades when real minimum wages dropped by 30% between 1980 and 2000 (ILO 2002: 70).

Importantly, there is strong evidence that a series of government policies were effective in driving the decrease of inequality. The literature is almost consensual in indicating that the key process throughout the continent was a better distribution of labour-market income (i.e. wages, self-employment income and so on), particularly through rising income in the bottom of the distribution, complemented by rising government transfers via CCTs and pensions (Azevedo *et al.* 2013, Cornia 2012, 2014a, Lustig *et al.* 2013, Maurizio and Vázquez 2016). Azevedo *et al*. (2013), for example, studying 14 Latin American countries during the 2000s, find that on average 55% of the decline in inequality was due to changes in the distribution of labour-market income, with only four countries deviating substantially from this value, and 30% due to government transfers and pensions, with little country-level deviation (for comparable results, see also Cornia 2012, Keifman and Maurizio 2014).[12]

This more equal distribution of labour market income was in turn caused by politically determined MW hikes, as well as lower skill premia and labour formalisation (Cornia 2014a, Keifman and Maurizio 2014, Maurizio and Vázquez 2016). Although the expansion of secondary and tertiary education contributed to reduce skill premia, the main driver of the latter and of labour formalisation was the relatively fast pace of growth and its sectoral, technological and organisational dimensions, which reduced unemployment, heated the labour market and raised the relative demand for low-skilled as opposed to high-skilled labour (Galiani *et al.* 2017, Lustig *et al.* 2013, Tornaroli *et al.* 2014).

If there was a general decrease of inequality throughout Latin America after the turn of the century, Cornia (2012) shows left-of-centre governments promoted redistribution to a larger extent. Furthermore, even within the Pink Tide governments, the more combative ones – such as Bolivia, Argentina and Ecuador – positively stood out, recording a decrease of the Gini index around or above 0.10 (Table 1.3 and Figure 1.1). These results, indicating a widespread redistribution led by left-of-centre governments, highlight the relevance of drivers and enabling factors at different scales. They range from global conditions, such as the commodity boom and international liquidity, to domestic specificities, such as the structure of collective bargaining and the size of MW hikes. There was also substantial

[12] It should be noted that the income-source decomposition of changes to household per capita income inequality that Keifman and Maurizio (2014) use (for more details, see Keifman and Maurizio 2012), differentiating between categories of labour-market income, has misleading results when assessing the contribution of labour formalisation (see also Amarante 2016, Judzik *et al.* 2017). This is discussed in chapter 2, and a method is developed for dealing with the problem which is exemplified in chapter 6.

convergence in some areas of social policy, such as the widespread adoption of CCTs (see below). The precise causal chain connecting these different elements is bound to have varied in each case, but any explanation must take due account of these several interlocking mechanisms.

In sum, policy initiatives of the Pink Tide governments positively impacted the livings standards of the working classes, even if income redistribution also occurred to a lesser extent throughout the continent. Changes to the productive structure of the economies, reviewed in the previous section, interacted with a series of income-supporting and labour market policies, thus producing a more equal distribution. Central to this were changes to the distribution of labour-market income, particularly as regards rising earnings in the bottom half, in turn connected to high growth rates of output, MW hikes, labour formalisation and lower relative demand for high-skilled labour. These results discredit interpretations that ascribe to foreign conditions the direct or sole determinant of improved living standards, and likewise require at least a more nuanced view than that of many critics of the Pink Tide. The issue is thus not assessing whether the latter improved the material conditions of the working classes, but exploring the limitations of this process. In the next section, this is explored through the changing nature of state power.

1.5. The changing character of state power: a neo-corporatist mediation of class relations

If the neoliberal state was mainly the enforcer of market discipline on capital and labour, under the Pink Tide it took on a more flexible character, which attempted to mediate (intra-)class relations via economic and social policies and negotiation procedures (Bonnet and Piva 2012, Modenesi 2012). A clear expression of this was the establishment of tripartite negotiation forums, institutional spaces of negotiation that brought together representatives of the state, business federations, trade unions, and social movements This could be seen as a neo-corporatist arrangement, in light of the presence of social movements, as, traditionally, corporatism refers to negotiations forums between organised labour, firm representatives and state managers. By means of these forums, governing parties attempted to shape the strategies of the different collective actors and distribute resources, with the aim of securing results for all of them that were compatible with the continuity of accumulation and that guaranteed support for the government.

This mediating role was predicated upon a more direct participation of state power in the relations between capitalists of different economics sectors, as well as in the reproduction of labour power. As regards the former, the main element was the attempt to steer accumulation towards a 'national development project', for which the governments had

to prioritise the relevant sectors and companies. This was done, for example, by actively using procurement policies to stimulate domestic firms, offering tax subsidies for strategic sectors and the like. As for workers, rising MWs and a significant increase in social policies, however not universal, were key. Finally, as class conciliation reached its limits, the continued repression of 'hardliner' popular organisations ensued (see the examples of the TIPNIS march and the repression of *Piqueteros* below).

This state form was capable of securing gains for the working classes, but at the cost of preventing deep transformations, and it was dependent on maintaining fast growth. As argued below and in the case studies, the governments staked their legitimacy on securing the profitability of various fractions of capital and on there being gains for large sections of the population. In other words, these governments portrayed themselves as the conductors of a national development strategy, construed as the simultaneous advancement of the material interests of fractions of domestic capital and of low-income workers. This meant that, by and large, they had to adopt broad electoral fronts, avoid overt conflict with dominant groups, and continuously deliver short-term results. Tied to these dominant interests, the governments could not drive deeper changes of the productive structure or of power relations, and they were prone to destabilisation as soon as growth faltered. These developments are reviewed in order.

In the transition to neoliberalism, state power was used to push the privatisation of state-owned enterprises (SOEs), market liberalisation and the rollback of sector-specific policies (Medeiros 2009, Potter 2007). Thereafter, it sought to advance the integration of national economies to the world market, privileging the interests of financial forms of capital and arbitrating less between other fractions (Medeiros 2011, Robinson 2008). Likewise, to assure price stability and supress distributional conflicts, the state did not participate directly in wage negotiations, but rather repressed workers' mobilisations. Therefore, competing in a globally integrated market became the central locus of class relations and the way to achieve wage gains or higher profitability, and state power actively enforced this (Bonnet and Piva 2012).

On the other hand, under the Pink Tide state power assumed more the role of an arbiter, in the neo-corporatist pattern of organising class relations mentioned above (Bonnet 2012, Piva 2011). The first implication of this process was that, if successful, it routinised social conflicts and was capable of directing capitalist accumulation strategies towards potentially developmental objectives (such as a pro-poor growth pattern). This was particularly important in light of the growing social struggles of the 1990s, which challenged neoliberalism (Silva 2009). Second, as state power came to be seen as responsible for the material outcomes of the various class fractions, neo-corporatism

directly politicised accumulation. Third, and as a consequence of this, the legitimacy of the governments became increasingly attached to securing modest gains for the relevant classes – bankruptcies of industrialists, for example, could no longer be 'explained away' as a result of inefficient competition (as in the 1990s), but turned into a directly political problem. Therefore, state power also took on a more active role in intra-capitalist relations and in reproducing labour power to maintain its legitimacy, as analysed below.

In terms of their participation in the circuit of capital, Pink Tide governments recovered some planning capacities, shifted towards more discretionary economic policies and, in some cases, partially re-nationalised formerly privatised SOEs. This is what many authors saw as a neodevelopmental state form, which actively intervened via subsidies and tax exemptions to stimulate particular economic sectors, sponsored the internationalisation of 'national champions' with the aid of development banks, took on a greater role in providing infrastructure, redirected procurement policies to domestic firms of strategic sectors and, in general, attempted to steer accumulation towards a pattern compatible with a particular – and always selective – view of what national development would be (Biancareli and Rossi 2014, Boito Jr and Berringer 2014, Ebenau 2014, Féliz 2012, Morais and Saad-Filho 2012, Petras and Veltmeyer 2007, Schutte 2013). National development was portrayed, in particular, as the success of the accumulation strategies of large domestic capitalists (Boito Jr and Berringer 2014).

In contradistinction to the old Latin American developmental state of the import substitution industrialisation period, however, the *neo*developmental state did not seek to overcome the countries' position in the world market and relied less on the domestic market; it was a watered-down version of its precursor (Leiva 2008). In Boito Jr's and Berringer's words, 'neodevelopmentalism is *the developmentalism of the era of neoliberal capitalism* ... the development policy that is possible within the limits of the neoliberal capitalist model' (2014: 97, emphasis in the original). The neodevelopmental state was thus this state form that sought to steer domestic accumulation, through the active use of a series of economic policies, towards a pattern that assured the dominance of the interests of large domestic capitalists.

Regarding their participation in the reproduction of labour power, Pink Tide governments acted on two main fronts to guarantee rising living standards for the working classes, which was necessary if a modicum of stability was to obtain (and it did). The first was guaranteeing rising real wages and the formalisation of labour relations for low-skilled workers, thus leading to gains along the bottom to middle of the distribution. This was partially a direct result of policies, such as systematically raising real MWs (ILO 2013: 127), and was stimulated by the governments' steering of tripartite negotiation forums.

To a large extent, however, it was also the result of the overall dynamics of the pattern of accumulation, which, as discussed in the previous sections, raised the demand for low-skilled workers through a regressive structural change.

The second significant change to social reproduction came through CCTs, which increased their coverage throughout the region during the 2000s and raised the income of the poorest groups of the population, whilst universal social safety nets and public services showed much less improvement. In 2013, CCTs were present in 20 countries and reached approximately 120,000,000 people, or 20% of the region's population (Cecchini 2013). On the positive side, there is strong evidence that they were indeed able to reach the poor and very poor. There is also evidence that, if properly designed, they do not significantly stimulate labour market segmentation or informality, increase the fertility rate of beneficiaries (Stecklov *et al.* 2007) or reduce labour market participation (Alzúa *et al.* 2013, Kabeer and Waddington 2015). That they have lifted millions out of poverty at a very low cost of approximately 0.4% of the region's GDP is no mean feat (Cecchini and Madariaga 2011).

In spite of this positive record for CCTs, the claims about their capacity of achieving longer-term goals – breaking the inter-generational transmission of poverty – are much more debatable, and as of yet the studies have not been conclusive (Araújo *et al.* 2017, Handa and Davis 2006, Jones 2016, Lavinas 2013, Molina-Milan *et al.* 2016, Valencia Lomelí 2008). Moreover, given the small value of benefits, in most cases poverty *vulnerability* has not been adequately addressed, and improvements in the labour market were more important in reducing inequality in Latin America (as discussed in section 1.4). Finally, cheap though they might be, their cost-effectiveness is by no means demonstrated, given leakages and higher administrative costs as compared to universal programmes (Saad-Filho 2015, Segal 2011). The extension of CCTs can thus be considered a welcome, if far from sufficient development.

Summing up, the state form under the Pink Tide was characterised by a neo-corporatist pattern of mediating class relations, whose legitimacy depended on arbitrating between different classes and class fractions. Regarding material outcomes, this was done via i) a neodevelopmental participation in accumulation, with discretionary economic policies seeking to assure that large domestic capitalists would be the greatest beneficiaries; ii) active labour market policies and rising MWs, benefitting formal workers; and iii) CCTs to reach the population in more destitute situations. It is now necessary to look at how this was associated to a more strictly political (that is, not directly material) relation between the government and class entities.

1.6. Class conciliation, demobilisation and repression

Beyond its material foundations, the political relation between the government and class entities was based on a two-sided process aimed at class conciliation. It comprehended, first, incorporating or co-opting the representatives of trade unions and social movements, who would participate in negotiation forums. Second, as its corollary this relation also involved isolating or repressing independent entities. This strategy aiming at class conciliation stands in contrast to two different approaches. On the one hand, it was not based on the outright repression of, or a non-negotiating stance towards popular organisations, which is what prevailed during the 1990s. On the other hand, neither was it based on fostering the organisational strength of trade unions and social movements in order to govern in the benefit of popular interests, relying on mobilisations from these collectives to secure the needed political conditions. This class conciliation strategy thus aimed at securing social order by granting concessions to workers and popular sectors, at the cost of preventing their independent organising and combative mobilisation.

The central element in this class conciliation strategy was thus 'convincing' labour and social movements to abandon extra-institutional mobilisation and direct action in favour of official channels, whilst the second element was dividing class entities and social movements into 'good', negotiating ones, and 'bad', independent ones (Boito Jr *et al.* 2009, Castorina 2013, Galvão 2014, Webber 2014). On the one hand, therefore, many leaders of trade unions and social movements were incorporated into the state apparatus, assuming government offices; on the other hand, independent or more combative organisations were excluded, which created divisions within popular sectors and restricted the horizons of what was at stake in official negotiations (Antunes 2013, Castorina 2013, Farthing and Kohl 2014, Oliveira 2010, Webber 2014).

To the extent that this incorporation of labour and social movements was effective, it amounted to a decrease of social conflict, in light of the abandonment of extra-institutional mobilisation. Furthermore, to the extent that official negotiation channels could deliver economic gains for popular organisation, it allowed for the possibility of sharing, to an extent, in the gains large capitalists enjoyed. Accumulation was thereby stabilised, and within certain limits negotiations around the material distribution of benefits could be conducted by qualified class entities. This strategy of working from within (or in close association to) the government, however, curtailed the tools popular sectors could use in their struggles, as they lost the ability to mount pressure on the government outside official channels. Independent organising, extra-institutional mobilisation and more combative tactics were thus removed from the arsenal of popular organisations.

It should be noted that, during the 1990s, a wider variety of tactics, independent organising and extra-institutional mobilisation had increased the strength of labour and social movements, and this had been a key element to fight against neoliberalism and bring the Pink Tide governments to power (Silva 2009, Webber 2011a). The class conciliatory strategies of the Pink Tide governments, therefore, delivered gains through negotiation, but reduced a source of strength to push for deeper transformations. Ironically, then, in the medium term they might have hampered the continuity of reforms by hindering popular mobilisation from below, an important element in obtaining concessions from capital. This combination of improved material conditions without political empowerment, promoting instead class conciliation, is another illustration of the limits of the inflection under the Pink Tide.

All of these were widespread processes under Pink Tide governments, of which examples are offered for Brazil, Argentina and Bolivia. In Brazil, after the PT came to power, it appointed many union leaders to key positions in the state apparatus. The *Central Única dos Trabalhadores* (CUT), the main trade union federation, became organically linked to the routine management of the state. Once a combative and innovative organisation, it was already moderating itself throughout the 1990s; with the PT in power, however, it clearly opted for a negotiating strategy and abandoned tactics reliant on wide mobilisations of its base (Antunes 2013, Galvão 2014). As for the *Movimento dos Trabalhadores Rurais sem Terra* (MST), they did not establish organic links with the government, but likewise opted for a negotiating strategy in which the resort to direct action was strongly curtailed. As an MST militant put it, 'When government is ours, it's worse. The MST stops organizing protests' (Vergara-Camus 2009: 186).[13]

When independent struggles occurred in Brazil, they were met with indifference to their demands, repression and police violence. The countrywide 2012 strike of federal university workers is a good example, but the response to the mobilisations of 2013 is the strongest (Harvey *et al.* 2015, Moraes *et al.* 2014). What came to be known as *Jornadas de junho* were the first mass demonstrations in the country for decades, with millions of participants and myriad demands centred around the provision of quality public services (Singer 2013). They were outside the influence of government-aligned trade unions and social movements, which led to very few of their demands being met. Finally, police violence was an initial cause of their growth, and it continued to be present throughout their whole unfolding without being condemned by president Dilma Rousseff.

[13] The number of families in MST encampments, another measure of the extent of their combative actions, dropped from 10,750 in 2002 to 4,570 in 2014 (CPT 2015).

In Argentina, the introduction of *Plan Jefes y Jefas de Hogar Desocupado* (PJyJHD), a CCT programme, had important implications for the unemployed workers organisations known as *Piqueteros*, hitherto highly mobilised (Castorina 2013). The government selectively incorporated the leaders of certain organisations into the state apparatus to administer PJyJHD benefits, whilst repressing those that did not cooperate. 'Good *Piqueteros*' thus became government allies and received the power to administer cash transfers, and 'bad' ones were alienated and dwindled (Bonnet 2006, Grigera 2006). This destroyed horizontal linkages between the various grassroots movements, but at the same time stabilised conflicts. As for labour struggles, the Labour and Social Development ministries were reinstated as the site of tripartite negotiations, with important implications for moderating workers' strategies. This state-sponsored negotiating strategy could bring important trade unions along, in particular the *Confederación General del Trabajo de la República Argentina* (CGT), which adopted substantially moderate tactics (Bonnet 2012, Bonnet and Piva 2012).

In the case of Bolivia, a similar process of incorporation and repression took place. On the one hand, various organisations that formed the basis of the *Movimiento al Socialismo* (Movement Towards Socialism – MAS, the left governing party since 2006) have become part of the state apparatus and opted for institutional-based forms of struggle. The leaders of entities representing indigenous movements and trade unions, such as the *Confederación Sindical Única de Trabajadores Campesinos de Bolivia* (CSUTCB), have assumed several positions in office (Farthing and Kohl 2014).[14] This 'de-colonisation' of the state, a central platform of the MAS government, has arguably led many marginalised groups to see themselves reflected in the state apparatus and allowed for real gains in negotiation processes (Ikemura Amaral 2014).

This incorporation of historically excluded groups in Bolivia came with a caveat, nevertheless. When social movements understood the state was not acquiescing to their demands and opted for direct action – which, it must be remembered, is what originally stood behind the insurrectionary movement that culminated in MAS's rise to power (Webber 2011b) – they were repressed and deemed 'imperialist conspiracies' or the agents of foreign NGOs. The clearest example of this process came in the wake of the conflicts around the TIPNIS national park (Territorio Indígena y Parque Nacional Isiboro Sécure), when mostly indigenous groups protested against government plans to build a motorway through it. As Sanchez-Lopez reports, 'the government disqualified the legitimacy of this civic action arguing that the indigenous organizations were manipulated by the "oligarchy

[14] In comparative terms, they have also been able to maintain greater independence from the government, and many have split from it since 2006. This greater capacity of holding the government to account from below might explain the greater longevity and social gains under the MAS.

elites, the green imperialism of Western NGOs and the US government'" and brutally repressed them (Sanchez-Lopez 2015: 24).

This whole process receives its perhaps clearest expression in the thought of Álvaro García Linera, Bolivia's vice-president and a prolific theoretician. As he put it, 'the Bolivian people have consolidated their historical unity around a *single* project for the state, the economy and the society' (García Linera 2011: 7 emphasis added). In fact, since the consolidation of the revolutionary process we would be witnessing the dissolution of the state form into society, creating an 'integral state' (p. 10). The government and its allies would thus concentrate in themselves all the 'creative tensions' of the revolution, the only paths capable of further advancing popular goals (p. 28). The corollary, even if García Linera is not explicit, is that every mobilisation not contained within these limits, such as those of communities that resist extractivism, must of necessity be denounced as particularistic, counterproductive or even imperialist (Schavelzon 2018, Webber 2014). The state form thus allegedly became the arbiter of all that is progressive, with which only two political positions would be possible: one is either for it, and (critically) supports it from within, or a right-wing agent of counter-revolution. Whilst García Linera restricts his analysis to Bolivia, it can arguably be extended to encompass the strategies and rhetoric of various others Pink Tide governments. As Sader (2013b), a staunch supporter of the PT in Brazil and of the Pink Tide governments more generally, put it for Brazil: 'This group, which allegedly took to the left of the PT to found PSOL [*Partido Socialismo e Liberdade*], quickly added itself, in a subordinate manner, to the right-wing attack on the government ... The extreme left ... has, tacitly or explicitly, allied itself with the right against these [Pink Tide] governments'.

1.7. Final remarks

Latin America underwent a multifaceted process of social change under the Pink Tide. Neither a clear continuity with the immediately preceding neoliberal past nor a deep-rooted break with it, the Pink Tide was a nuanced and internally differentiated inflection. There were undeniable material gains for the popular classes, as inequality, poverty and labour informality levels decreased, in large measure due to the political initiative of left-of-centre governments. This occurred, nevertheless, under very particular foreign conditions, given the coincidence of the high international commodity prices and capital flows to less-developed economies. Whilst the latter did not *determine* the processes indicated above, they do seem to have played a contradictory enabling role, and their overall impact is still far from clear. Additionally, the Pink Tide governments promoted problematic

economic and political developments, which sapped the potential for a continued process of gains for the population.

Regarding the wider interpretive frameworks put forth above, little evidence is found in support of mainstream analyses. The data and the literature show that inequality decreased more in those countries that further departed from neoliberalism and had more confrontational governments. This indicates that it was not the strict obeisance of the Post-Washington Consensus, as this line advocates, that led better results for the population at large. Moreover, whilst highlighting the undeniable importance of the commodity boom, in some variants (e.g., Murillo *et al.* 2011, Weyland 2009) of this interpretation domestic factors and policy choices are overlooked, seen as almost unmediated products of the foreign scenario.

The idea of a post-neoliberal state, in turn, suggests too strong a break with previous patterns. It underscores the social gains achieved, taking them as indicative of a fundamental change towards a pro-poor, inclusive growth pattern, as well as the more independent foreign policy of the Pink Tide governments. If this line duly emphasises certain gains for the working classes, it sheds little light on the shortcomings of these governments and the reasons behind their eventual faltering and ouster from power. Fundamentally, it disregards how the policy choices were incapable of upgrading the productive structures of the economies, but rather intensified an ongoing regressive structural change, whilst class conciliation and the repression of independent struggles reduced the organisational capacities of popular groups.

Variants of the third interpretive framework present a stronger case, based on which a synthesis is proposed that encompasses the main inflections in the pattern of accumulation, in the social policy mix and in the state form. These can be respectively described as a regressive structural change through the rise of neo-extractivism, the expansion of CCTs and MW hikes, and the adoption of neo-corporatist elements. Neo-extractivism or the commodity consensus (Svampa 2013, Veltmeyer 2013) thus highlights the centrality of commodity exports, as well as the state's role in fostering them, as direct or key enabling conditions of accumulation. This is linked to the idea of a compensatory state (Gudynas 2012), which taxed such activities to fund social policies. If this brought about material gains, it fell short, however, of instituting universal safety nets or de-commodifying basic needs, underscoring the limits of the transformations that took place. Neo-corporatism in turn indicates a state form that internalised class conflicts, circumscribing them to what was compatible with the then-prevailing pattern of accumulation, in an attempt to promote class conciliation by distributing material gains and preventing independent popular organisation (Bonnet and Piva 2012).

The main thread that runs through these dimensions – neo-extractivism, a CCT-based social policy mix, and neo-corporatism – is that, to different degrees, the Pink Tide governments chose the paths of least resistance in trying to advance a reformist project. They restricted their goals, adopted tactics consistent with this and delivered what was possible under these circumstances: some gains to the working classes when compared to the neoliberal past, but without promoting deep structural changes and at the cost of preventing popular empowerment. Lowering informality but through precarious employment, reducing inequality but only to the levels of the 1980s, and achieving higher growth rates whilst cementing a peripheral insertion in the world market are illustrative. These were undoubtedly important inflections, but not strong enough breaks to institute self-sustaining processes that would endure.

In this vein, there was a strategic complementarity between neo-extractivism, a CCT-based social policy mix and neo-corporatism. These were all mechanisms for social compromise that, compared to the preceding phase of strict neoliberalism, allowed for relatively greater gains for the working classes. The inherent cost, however, was that they prevented popular empowering, contentious politics and a clearer break with the prevailing productive and class structure. Whilst it is beyond the scope of this chapter to try to discern the precedence or causation of each of these elements, it is argued that over time, through a trial-and-error process, they reinforced and supported each other. As neo-extractivism offered funding for CCTs and relaxed the balance-of-payments, there was interest in stimulating commodity exports; CCTs together with rising low-skilled wages sustained popular approval of the governments; and faster growth with lower inequality legitimated neo-corporatist, conciliatory class relations – which, in turn, helped guarantee the interests of local capitalists and so on.

This strategic complementary also explains the brittleness of the Pink Tide, as pursuing paths of least resistance eroded the political and economic resilience of these countries and hence made them vulnerable to destabilisation. The point is that there was a tendency for these forms (neo-extractivism, CCTs-based social policies and neo-corporatism) to develop alongside each other and forestall alternatives in any single dimension. Why go for independent labour mobilisation when neo-corporatism was delivering wage gains? Why attempt a larger overhaul of macroeconomic policies if there had been growth and this would require confronting powerful interests? Fundamentally, how could any of these possibilities obtain without strong popular organisation? Attempting to change one dimension without supporting transformations in the others was hence extremely unlikely. The different elements were thus likely to stand and fall together, in the latter

case particularly if subjected to foreign-determined shocks, of which the fall in commodity prices offers a prime example.

It is thus no surprise that, as foreign conditions worsened in the early and mid-2010s, the social formations found themselves in a debilitated position and the processes that sustained these governments in power were no longer operative. The predictable crisis that ensued thus did not lead to a deepening of the progressive elements in these hybrid state forms, particularly given the demobilisation of popular forces, but rather to exclusionary adjustments. Which is to say, instead of trying to solve the crises via public investment, tax reforms to redistribute money to the poor and so on, austerity measures were instead called for. This is diametrically opposed to the neoliberal crises of the late 1990s, which occurred in the wake of long-term processes of popular organisation and eventually led to the election of left-of-centre governments.

In the medium-term, these paths of least resistance ironically went from being the most realistic options to utopic ones. They eroded their conditions of existence, without promoting structural economic and political transformations that could deepen their progressive impact. This underscores the dangers of broad political fronts and minimalist reformist programmes. Their very condition of success in the short-term – appealing to a broad section of the population and avoiding overt conflict – prevents them from confronting established interests, particular capitalist ones. On the contrary, the dynamics that unfold are all geared towards class conciliation and incremental reforms, thwarting more transformative actions and the very continuity of such already-diminished goals.

Going forward, this fairly abstract synthesis is interrogated through the experiences of Brazil and Argentina. Crucially, this thesis fleshes out the mediations between these different levels of analysis, from global economic conditions to the political strategy of the leftist parties, in order to explore the advances and limitations of the development strategies that were in place. This is done by identifying the mechanisms that produced growth, redistribution and structural change, and how their interaction over time generated constraints that could not be overcome under the prevailing framework. The next chapter lays down the methods used to do so and the overall interpretation of the Brazilian and Argentinean cases. These are then explored in chapters 3 through 6, which sequentially focus, for each country, on growth and structural change and then on income redistribution. The last chapter compares the two experiences and draws the relevant conclusions.

2

The general approach and methods

2.1. Introduction

It was explained in the Introduction that the central goal of this thesis is to assess how the material and social circumstances of workers were transformed under the Pink Tide, in view of the broader political and economic changes these governments brought about. To this extent, Chapter 1 offered an overview of Latin American economies during the last decades, with a focus on the drivers and limits of the growth and redistribution process that took place. During the 2000s, under the influence of the commodity boom and with abundant international liquidity, the balance-of-payments constraint to growth was alleviated and Latin American countries managed to accumulate a sizeable stock of foreign reserves. As growth accelerated in the first decade of the 21st century, a widespread regressive structural change also took place in Latin America. Manufacturing decreased its employment-share and low-productivity services expanded, whilst exports became more concentrated in commodities and primary products.

In spite of this regressive structural change having negative medium-term implications for growth and external vulnerability, nevertheless the living conditions of wide sections of the population improved under Pink Tide governments. It was shown how inequality declined as the direct result of specific policies, particularly MW hikes and to a lesser

extent CCTs, and through the overall effects of the characteristics of the growth process, as the demand for low-skilled labour increased. It was also proposed that the political strategies of the Pink Tide governments were based on prioritising the interests of large domestic capitalists, whilst at the same time securing material gains for workers. This strategy was effected by incorporating leaders of trade unions and social movements into the government and promoting institutional channels of negotiation between class entities, whilst isolating or repressing independent popular organisations and preventing extra-institutional mobilisation.

Based on a review of the evidence and the literature, an interpretation and framework for comparing the different national experiences of Latin American countries was put forward in the previous chapter. According to this reading, the Pink Tide governments' strategies of social transformation indeed promoted changes beneficial to workers, through policies that spurred growth and reduced inequality and destitution. These strategies, however, did not secure the economic and political conditions needed for them to be effective over a longer period of time, because they promoted a regressive structural change of the economies and demobilised popular struggles. As a consequence, when international conditions turned to the worse in the 2010s, these development strategies became ineffective in driving growth and redistribution, whilst there were no strong political forces that could push for a progressive resolution of the crises that ensued. This broad interpretation frames the discussion of the two cases that are analysed in detail in this thesis: Brazil, during the administrations of the PT from 2003 until 2016, and Argentina, during the administrations of the PJ from 2003 until 2015.

This chapter presents the methods and the approaches that are used in the thesis. The focus throughout is on understanding why the decrease of inequality in Brazil and Argentina faced medium-term constraints that eventually brought it to an end. This is done by investigating the characteristics and the drivers of growth and income redistribution over time, sequentially approaching the topic and the relationship between its elements at increasingly more concrete levels of analysis. This allows for a structured exposition of the accumulation pattern of the countries, identifying the roles its different elements played over time and how their connections not only promoted growth and redistribution, for a while, but also gradually tightened constraints that were not overcome under the prevailing framework.

The analysis is conducted separately for each country, in two stages, before an overall comparison is drawn. The first stage outlines the pattern of accumulation, focusing on identifying the drivers of growth and structural change and the evolution of the economy's key constraints. Given that it is proposed that income redistribution, with specific

implications for the sectoral pattern of effective demand, was a driver of growth, this first stage of the investigation does include an initial discussion of distributional developments. The latter are restricted, however, to their macroeconomic and sectoral dimensions. The second stage then analyses in greater concreteness the distribution of income and how it evolved, exploring its class character and identifying the central drivers of falling inequality. The distributional results build upon and are interpreted in light of those of the previous stage, namely changes to the productive structure of the economies, the policy context, and the overall pattern of accumulation, which are the linchpin of profitability and labour-market dynamics and hence the deep determinants of the distribution of income. Together, these two stages identify how in each country there was a specific interaction between accumulation and redistribution, alongside their particular evolving constraints, which are compared in the conclusions of the thesis.

The chapter is organised as follows. After this introduction, section 2.2 presents the methods used to analyse growth, structural change and the evolution of the economies' constraints. Sections 2.3 and 2.4 present the approach taken to class analysis and inequality. Specifically, section 2.3 develops a typology of class positions, applied to data from household surveys, and explains how this connects to the overall approach. Section 2.4 in turn presents the methods for measuring and decomposing income inequality, including the development of novel indicators for the sensitivity of total inequality to changes in the size and relative income of sub-populations. Section 2.5 builds upon the preceding ones to present a framework that explains and compares the growth and redistribution process in both countries.

2.2. Growth and structural change

Following the sequential approach laid down in the introduction, the first step is to analyse the determinants and characteristics of the growth process. First, a decomposition of growth by the components of GDP (household consumption, investment, government consumption, exports and imports) is performed, which establishes the domestic or external orientation of growth and the leading sources of demand. This then leads to an analysis of the main activities (economic sectors) in the expansion, to investigate whether there was structural change and the quality of the employment created. Finally, the interconnections between the sectoral characteristics of growth, the employment generated and the patterns of demand are investigated. Based on this, a broad characterisation of the accumulation pattern is possible, with implications drawn for balance-of-payments sustainability and inflationary control.

Following a simple accounting identity, GDP (Y) in time t is the sum of household consumption (C), investment (I), government consumption (G) and exports (X), minus imports (M):

$$(1.1) \quad Y = C + I + G + X - M$$

and the GDP growth rate is the sum of the growth rates of these components multiplied by their share of output in time $t-1$:

$$(1.2) \quad y_t = \frac{Y_t - Y_{t-1}}{Y_{t-1}} = c_t \frac{C_{t-1}}{Y_{t-1}} + i_t \frac{I_{t-1}}{Y_{t-1}} + g_t \frac{G_{t-1}}{Y_{t-1}} + x_t \frac{X_{t-1}}{Y_{t-1}} - m_t \frac{M_{t-1}}{Y_{t-1}}$$

where lowercase letters represent growth rates.

Based on equation (1.2), it is possible to offer a first characterisation of the accumulation pattern by identifying the mains sources of demand that drove growth. As an identity, however, this equation does not indicate causality, nor does it reflect upon the linkages between different elements of output. Furthermore, imports are a supply-side variable that should ideally be made endogenous to the dynamics of demand. Nevertheless, by identifying which sources of demand were directly responsible for the growth rate of output, equation (1.2) can help identify the contours of the pattern of accumulation.

The weight of the different components of demand reveals important information about growth, its sustainability and the policy space for influencing it. A high reliance on exports, for example, would indicate an export-driven growth pattern. Guaranteeing international competitiveness in the relevant sectors would thus be a direct constraint to growth, with implications for how wages and productivity were allowed to vary. Depending on the nature of the exported goods, a dependence on high international prices could also arise. Likewise, if growth were found to be mainly reliant on government consumption, financing these expenditures would become a central constraint. As for household consumption and investment, their role can vary substantially depending on the overall connection between the different elements. These connections depend on a series of characteristics of the economies, such as the presence and determination of government transfers, access to credit and the like, so their analysis needs to be done in tandem with that of the policy mix in place. This is left to the individual case studies, in connection with the sectoral elements presented below.

Equation (1.2) also reveals the role that the balance-of-payments constraint to growth played. If exports led growth and grew faster than imports, securing growth and assuring external solvency would have been tightly linked goals. Barring intense and sustained foreign outflows of capital, the economy would not have been constrained by the balance-

of-payments in the medium term. On the other hand, if domestic components of demand were the drivers of growth, rising exports would not have been needed in the short term to assure fast output growth rates. Exports would still have been needed for the indirect, but equally important role, of assuring that the balance-of-payments constraint was not binding over the longer term. If this was not the case – i.e. if there were persistent or growing trade deficits – then the growth pattern was unsustainable (this is discussed in further detail below).

The next step is to examine the extent to which the growth process was accompanied or not by structural change, i.e. by a changing sectoral composition of the economy. Based on national accounts data at the most disaggregate level available, changes to the sectoral composition of the economy are first examined in terms of employment- and output-shares. The focus throughout is on changes to these compositions, which reveal the dynamic elements of the economy, and not on their shares in any point in time. For example, a pattern of accumulation is considered to be driven by the provision and consumption of wage-goods if sectors producing wage-goods generate the most net employment and increase their output the most, even if throughout the studied period they continued to represent a relatively small share of the overall economy. It is not a matter of what constituted the bulk of an economy in a given point in time, but rather what were the dynamic elements that drove accumulation over a certain period.

The relevance of a sectoral analysis is a long-standing feature of development economics, even if it was somewhat neglected during the last decades of the twentieth century (for a historical review focusing on the link to industrial policy, see Andreoni and Chang 2018). The key insight that justifies such an approach is the consideration that the different sectors have got distinct implications for economic growth, particularly in dynamic terms. Which is to say, specialising in the production of certain kinds of goods (and services) will affect the medium- and long-term perspectives of economic growth for an economy. Accompanying the changing nature of production processes over time, there has been a debate about exactly which are the sectors most capable of driving successful 'growth stories' – and, consequently, of what would be the relevant mechanisms through which this would happen and the appropriate policies to foster it (Andreoni and Chang 2018, Chang 2002, Jomo and Fine 2006, Kyung-Sup *et al.* 2012).

Although classical economists already ascribed a clear role for manufacturing as drivers of growth, it was during the mid-twentieth century that a series of arguments were put forward which came to be associated with the promotion of *industrialisation* as a path for development. Seminal works along this line, such as Hirschman (1958), Kaldor (1966) and Myrdal (1958), all emphasised that not only did manufacturing have a higher labour

productivity, so that shifting labour from agriculture to manufacturing would increase global productivity, but it also provided greater opportunities for *dynamic* productivity gains. A series of mechanisms were proposed, such as that manufacturing had increasing returns to scale and strong backward and forward linkages, led to higher technological spillovers to other (sub-)sectors of the economy, led to learning-by-doing, and that the growth of manufacturing created 'industrial commons' (such as a modern workforce, time-keeping habits and so on) that could benefit the whole economy. The concept of a circular and cumulative causation between industrialisation and economic growth, although mostly associated to Myrdal (1958) and Kaldor (1966), encapsulates a more general idea of these approaches: after an initial (big) push, industrialisation would lead to a self-reinforcing cycle of growth and development, due to the particularities of manufacturing.

Towards the final decades of the twentieth century, with the realisation that not all industrialisation processes had led to the 'success stories' proposed by classical development economists, qualifications were offered for the argument that manufacturing was the driver of growth. Fernando Fanjzylber (1983), following the tradition of the ECLAC, argued that Latin America had had a 'truncated' industrialisation, as it had not internalised technological development, which forestalled its long-term growth opportunities (see also Tavares 1974). Attention thus shifted to the technological intensity of an economy, particularly its manufacturing sectors (Dosi *et al.* 1990, Lall 2000). In this vein, it was argued that low-technology manufacturing was a possible entry-level sector for underdeveloped economies, but the production of these goods involved 'easy' learning processes, limited economies of scale, and readily available technologies, all of which limited the space for further technological advancements and subjected the goods to intense price competition. After a certain 'level' of development, it was rather *technology-intensive* manufacturing that would present dynamic productivity gains, given it involved a large element of tacit know-how, which limited price competition, had greater space to implement – and develop – applied knowledge, with consequently greater spillovers to other sectors, and produced goods of greater income elasticity (see also Razmi and Blecker 2008).

More recently, a series of approaches have proposed to identify growth-driving sectors not through a priori characteristics, but rather by inductively examining the productive structure (particularly the exports) of advanced and less developed economies (Gala *et al.* 2018, Hausmann *et al.* 2007, Hidalgo *et al.* 2007, Lall *et al.* 2006). This has led to two main developments, the first of which is a classification of goods in terms of their sophistication (Hausmann *et al.* 2007, Lall *et al.* 2006). Sophisticated goods would be those produced by developed countries and unsophisticated goods those produced by poor countries, as seen through bilateral foreign-trade data. In spite of the rather shallow theoretical basis

of this formulation (for a critique, see Andreoni and Chang 2018), the basic idea is that producing 'rich-country goods' will accelerate growth for a series of reasons, and thus countries that are able to produce goods more sophisticated than expected for their GDP per capita will grow faster (empirical results are discussed below).

The second development of this recent agenda is the concept of the 'product space', based on an inductive classification of goods in terms of the probability of them being jointly produced or not (Hidalgo *et al.* 2007). The intuition behind this approach is that different goods might require similar capabilities to be produced (e.g. common infrastructure, particular skills in the workforce, access to certain natural resources), so that if an economy is strong in a given sector it might more easily branch out into neighbouring ones. Which is to say, existing trade patterns reveal which goods are jointly produced and can thus serve as platforms to produce similar ones, hence expanding output and moving into higher-value-added activities. This leads to a network consisting of a dense core of highly connected goods and a sparse, poorly connected periphery. The core comprises mostly machinery, chemicals and metal products, it is occupied by advanced economies, and – in light of its highly connected structure – it offers greater chances for branching into the development and export of a greater number of more sophisticated goods. Hence, occupying the core offers greater growth perspectives. The periphery in turn comprises mining, simple manufactured goods (e.g. textiles), and most agricultural products, it is occupied by poor countries, and, given the sparse connection of its goods, being in a peripheral position offers few perspectives for diversifying productive structures. Therefore, the growth potential of a country can be increased (decreased) if it latches onto the production of more (less) sophisticated, core (peripheral) goods.

Recent empirical studies have broadly confirmed the predictions of these approaches and shown that, in spite of their methodological and theoretical differences, there is a practical convergence of predictions based on the sophistication of goods and on the presence of technology-intensive manufacturing (Felipe *et al.* 2012, Hausmann *et al.* 2007, Hidalgo *et al.* 2007, Jarreau and Poncet 2012, Lall 2000, Lall *et al.* 2006). There are three main results for the purposes at hand. First, it was shown that countries that export a basket of more sophisticated goods (or more technology-intensive manufacturing) at a certain point in time tend to grow faster over the following years, even when controlled by standard covariates such as GDP per capita, factor endowments, population size and so on (Hausmann *et al.* 2007, Jarreau and Poncet 2012).[15] Second, the growth of exports

[15] This also holds at subnational levels, as Jarreau and Poncet (2012: 285) have shown for Chinese provinces: 'Holding other factors constant, a 10% increase in export sophistication (corresponding to the standard deviation divided by the mean ...) raises the average annual real income per capita growth rate over the following 12-year period by about 0.7 percentage points.' The authors have also gone further and indicated

(and not only GDP per capita) was shown to be particularly sensitive to the sophistication and technology-intensity of goods, indicating that these products have high income elasticities and that producing them enables countries to branch into new markets or products (Felipe *et al.* 2012, Hausmann *et al.* 2007, Lall 2000, Lall *et al.* 2006). Third, the predictions of subsequent GDP or export growth hold when using measures of either the share of technology-intensive manufactures or of the sophistication of exports, indicating a substantial practical convergence between the two approaches (Felipe *et al.* 2012, Jarreau and Poncet 2012, Lall *et al.* 2006). In light of this comparability, throughout this thesis the technological intensity of goods will be used as the main measure, given its easier interpretation.

The main difference in these two classifications regards primary products and resource-based manufactures, which, as discussed by Lall *et al.* (Lall 2000, Lall *et al.* 2006), vary substantially in terms of their technological intensity. Soybeans and their derivatives, as well as petroleum and its by-products, fall into these two categories and, as shown in chapters 3 and 5, have been some of Brazil's and Argentina's main exports.[16] Their current production processes involve, furthermore, high levels of technology. Nevertheless, these are all unsophisticated, peripheral goods: based on 2010 data, their sophistication indices varied between -0.51 and -2.1 (where positive numbers indicate sophistication), ranking them from 850 to 1220 out of 1241 goods in terms of their *un*sophistication (where higher ranked goods are *less* sophisticated), and they all occupied peripheral positions in product space (data from The Atlas of Economic Complexity 2018). Which is to say, producing and exporting soybeans and petroleum derivatives offer an intermediate growth potential. They are better growth-drivers than other agricultural products or mining, in light of their technological intensity, but they are not comparable to high-technology manufacturing in terms of linkages and overall dynamic productivity gains.

Structural change is approached not only in terms of its impacts on the growth potential of the economy, but also as regards the wage and skill levels of the workforce the different sectors employ and the destination of their output. The average wage and skill level of the workforce employed by the leading sectors reveals the quality of the jobs created, which is later used to support the more in-depth analysis of inequality. The more specific nature of these sectors, in terms of the goods produced, is used to explore interconnections

that production structures and ownership matter, as the growth-enhancing properties of upgrading exports do not include mere assembly operations or the activities of foreign-owned companies in Chinese provinces.

[16] Based on the HS 1992 classification, at four digits, these goods represent the following categories: 1201, 1208, 1507 and 2304 for soybean-related goods, and 2709-2713 for petroleum-related goods (category 3911 is also petroleum-related, but not a significant export for Brazil or Argentina). Soybean-related goods represented on average 21.0% of Argentinean annual exports from 2003 until 2015 and 8.9% of Brazilian ones, whilst petroleum-based goods represented 8.3% of annual Argentinean exports and 7.0% of Brazilian ones over the same period (data from The Atlas of Economic Complexity 2018).

between the different elements of the pattern of accumulation, seeking to detect mutually reinforcing structures and processes across growth, employment, the distribution of income and demand. The goal is to identify the links between changes to what is produced (the changing sectoral composition of output), how these changes impact the distribution of income (through the average wage levels of these sectors and their capital-intensity), and the demand patterns that arise from such shifts to the distribution of income (through the consumption patterns of households employed in the leading sectors). Once again, the focus is on sectors that had a substantial increase of output or employment, and were hence the dynamic ones regardless of their size, and not those that, although possibly sizeable, merely reproduced themselves without increasing.

Having established the main channels through which growth and structural change interact, the final step before a detailed investigation of inequality concerns the evolution of the economy's constraints, beginning by the balance-of-payments. The analysis of this constraint follows from Thirlwall's (1979) seminal contribution, which has seen several extensions and applications (see, inter alia, Botta 2009, McCombie and Thirlwall 1994, Soukiazis and Cerqueira 2012, Thirlwall 2011). The basic idea, however, is simple: in the medium-term, countries cannot increase their foreign indebtedness indefinitely, so the *maximum* sustainable growth rate they can achieve is that which keeps the current account and the balance-of-payments in equilibrium. This ultimately depends on the country's income-elasticity of the demand for imports and on the income-elasticity of the demand for its exports (in the latter case, the rest of the world's income is what is relevant). Considering the rest of the world's growth rate to be exogenous, these two elasticities together define the country's current-account dynamics in relation to its growth rate of output (these elasticities can change, as discussed below). Nothing guarantees, however, that an economy will actually grow at the maximum rate compatible with balance-of-payments solvency: this is a constraint, and not necessarily an attractor.

At any point in time, the balance-of-payments constraint to growth can thus take three forms. The first and most obvious one is if a country faces a balance-of-payments crisis, with immediate effects on growth. The second form, an intermediate one, is if a country is growing at a rate faster than that compatible with balance-of-payments solvency, accumulating foreign deficits that will eventually require some form of correction. This can be a contractionary adjustment, such as reducing growth to curtail the demand for imports, or processes that alleviate this constraint – such as substituting imports or exporting more elastic goods, which effectively change the elasticities and hence displace the constraint. Finally, the third form is when it is not operative, if the economy is for any reason growing below the maximum rate compatible with balance-of-payments sustainability, in which

case it merely indicates a limiting growth rate. If the balance-of-payments constraint is not necessarily operative at any given point in time, it is, however, the deepest constraint to growth an economy faces, for the simple reason that no single developing country has the necessary weight to alter global economic conditions or issue the international reserve currency.

The balance-of-payments constraint, as it is approached in this thesis, is essentially a medium- to long-term phenomenon, which makes it centrally related to structural change. In the short-term, of course, current-account deficits can be financed through a variety of mechanisms, with a non-neutral impact on the economy's structure and growth path (see, for example, Meyrelles Filho *et al.* 2013). The key issue, however, is that the export and import elasticities, which determine the maximum growth rate compatible with balance-of-payments solvency, can be strongly affected by structural change, as they are a function of an economy's productive structure and trade pattern.[17] In order to investigate the evolution of this constraint, this thesis thus analyses the composition and the dynamics of Brazil's and Argentina's import and export profiles.

In terms of imports, first the evolution of import penetration among different sectors is investigated. This indicates whether the economy was capable of keeping up with its international competitors or if, on the other hand, demand had to be increasingly met by imports that could previously be produced domestically. An increase in import penetration indicates a higher income-elasticity of the demand for imports, reducing the maximum growth rate compatible with balance-of-payments solvency. Second, imported goods are differentiated between intermediate, capital or final-consumption goods, which indicate balance-of-payments constraints of different natures. In particular, a large share of intermediate goods, especially if they have few domestic substitutes, indicates a rigid imports bill, in the sense of imports being inelastic to price and elastic to domestic income. In this sense, the composition of imports affects the degrees of freedom the economy has to adjust if it accumulates balance-of-payments deficits.

With regards to exports, as discussed above, goods have different dynamics depending on their technological intensity or sophistication. In particular, if a country's export bill shifts to more technology-intensive manufactures or to more sophisticated, core goods, this will increase its expected growth rate of exports – as a rule, these products have got higher income-elasticities and producing them increases the probability of exporting other new, sophisticated goods (Hausmann *et al.* 2007, Jarreau and Poncet 2012, Lall 2000, Lall *et al.* 2006). In terms of the balance-of-payments-constrained growth framework, a shift

[17] The role of structural change in shifting the balance-of-payments constraint was first formalised by Araujo and Lima (2007), and has since then seen a series of theoretical and empirical extensions. For an example studying Brazil, Russia, India, China and South Africa, see Nassif *et al.* (2017).

towards the exports of sophisticated goods increases the income-elasticity of the demand for a country's exports, raising the maximum sustainable growth rate of an economy and hence relaxing this constraint (Araujo 2013, Araujo and Lima 2007, Botta 2009, Thirlwall 2011).

Thirlwall's framework can thus be used as a way of investigating the evolution of a country's insertion into the world market. Fundamentally, a country can be considered to have a beneficial insertion into the world market if its interaction with economic processes beyond its borders fosters, or at least does not hinder, fast-paced growth.[18] As medium- to long-term characteristic, this is expressed, in this approach, through a country's maximum growth rate compatible with balance-of-payments solvency, the evolution of which thus charts a country's changing foreign insertion.[19] And, as discussed above, this framework points to the relevant mechanisms behind such evolution: the maximum growth rate is a function of import and export elasticities, which are centrally, if not exclusively affected, by structural change. Therefore, to the extent that a country increases its exports of sophisticated goods or develops its productive structure in a way that allows for substituting imports, it will relax the balance-of-payments constraint to growth and hence improve its insertion into the world market.

Based on the above, it is possible to define the direction of structural change – i.e. its progressive or regressive character – at three levels. At a first level, in a static framework, structural change is progressive if labour shifts from sectors with lower to those with *higher labour productivity*, and regressive otherwise. At a second level, from a dynamic point of view, structural change is progressive (regressive) if the sectors that create the most employment present relatively greater (fewer) opportunities for *dynamic productivity gains* – as discussed above, this means the production of more (less) technology-intensive or more (less) sophisticated, core goods. Finally, at a further remove and in light of the balance-of-payments-constrained-growth framework, structural change can also be considered progressive if it improves the *technological intensity or sophistication of a country's exports*, or regressive if it decreases them.[20]

In all three cases, the progressive or regressive character of structural change is identified by the latter's impact on the growth and productivity potential of the economy, and not on the distribution of income. The influence of structural change on the latter is analysed

[18] There are, of course, a series of other (non-economic) processes that influence how international relations affect a country's actual or potential growth rate, but they are beyond the scope of this work.

[19] This focuses on production and trade patterns, to the detriment of financial considerations. For a take on countries' international insertion from the perspective of currency hierarchies, see Conti *et al*. (2015), Kaltenbrunner and Painceira (2018), and Paula *et al*. (2017).

[20] It should be noted that this is a slight stretch of the term structural change, which is usually applied to indicate changes in the distribution of employment or value-added in an economy.

separately, and they can be divergent – i.e. structural change can be progressive (regressive) in that it increases (decreases) an economy's productivity, but creates income-streams that concentrate (equalise) the distribution of income. Indeed, as shown in chapters 3 through 6, in Brazil and Argentina there was a regressive structural change, with the rise of low-productivity services, which nevertheless created jobs that paid mid-ranked wages, thus improving the resulting distribution of income.

The second constraint regards inflationary dynamics, which were a central consideration in both countries during the analysed period, even if in the 21st century neither country underwent a reissue of the (near-) hyper-inflationary episodes they experienced in the 1980s and 1990s. Inflation is analysed through a distributive-conflict framework (also known as a conflicting-claims approach) based on the traditions of Rowthorn (1977), Kalecki (1943) and Kaldor (1976), which has three main pillars (for a review of different strands of the approach, see Lavoie 2014: ch. 8). First, prices are formed through a (variable) mark-up on costs, which include wage and non-wage elements. Second, and drawing on the first point, price-formation processes are a central mechanism of distributive conflicts in an economy, as workers compete with each other (by setting relative wages) and with capitalists (as overall wages and prices are readjusted) for access to the social product. In this conflict, the pace of productivity growth is a central element, as productivity gains increase output per worker and can hence accommodate growing claims on the product with lower or no impact on prices. Furthermore, the collective strength of workers (which depends on the configuration and strength of labour unions, the features of the labour market, and the overall wage-bargaining arrangement of the economy, i.e. it strongly depends on specific institutional and historical characteristics) is the key determinant of nominal wage growth in the different sectors and occupations. Third, inflation is in most circumstances a product of rising nominal costs (and hence 'cost-push'), except when there are substantially high levels of capacity-utilisation, when it can be considered 'demand-pull'. Inflation is hence determined to be cost-push whenever prices rise in response to increases in production costs, which mainly comprise rising nominal wages, rising nominal costs of inputs (including due to a higher domestic price of imported inputs, either because of rising international prices or domestic-currency devaluations), or a decrease of productivity.

Inflationary dynamics are related to the previous analyses of structural change and the balance-of-payments constraint. With regards to structural change, there are two main points to be considered. First, a progressive structural change, particularly if it increases the possibility of the economy having dynamic productivity gains, assuages the distributive conflict and hence works as a deterrent to inflationary pressures (and vice-versa, in the

case of a regressive structural change). Second, the capacity of sectors passing over cost-hikes to prices varies depending on their particular dynamics of competition (Giovannetti and Carvalho 2015, Silva *et al.* 2018). In particular, non-tradable sectors – such as most services – are more capable of implementing price rises as a response to an economy-wide rise in the wages of the workers they employ. Therefore, if there is a regressive structural change that stimulates non-tradable sectors, heating up the labour market for the workers employed in the latter and raising their nominal wages, this is expected to spur inflation. Tradable sectors, on the other hand, are limited by foreign competition in their capacity of raising prices – that is, unless the nominal exchange rate is devalued, with a positive impact on the balance-of-trade alongside further inflation-hikes as the domestic prices of imported goods rise (for a cost-push inflation framework focusing on exchange-rate management, see Vernengo and Perry 2018). As explored below, this indicates how distributive conflict connects the inflation and the balance-of-payments constraints via an analysis of exchange-rate management, structural change, economic growth and the dynamics of productivity.

Finally, the first stage of the analysis for each country concludes by exploring the connection between these two constraints and the how the policy mix in place was or not capable of overcoming them. The second stage of each country's study then offers an in-depth study of the evolution of inequality, drawing upon the dynamics of accumulation that were identified in this first step.

2.3. A class approach to inequality

In order to integrate the analysis of inequality into that of the pattern of accumulation, inequality is approached from a class perspective. The understanding of class that is adopted in this thesis, as explained in further detail below, allows for a ready link between the dynamics of the pattern of accumulation, structural change, transformations of the class structure, and how this maps onto shifting structures of inequality. The reason is that class is seen as a social relation between groups, mediated by and founded upon their position in the relations of production, hence transformations in the relations of production drive the class structure and how it embodies inequality. The analysis of how inequality is structured across class lines, and how this changes over time, in turn adds further depth to the previously identified dynamics of the pattern of accumulation, and also lays the foundation for an interpretation of key political processes as it reveals the evolution of the material conditions under which they unfolded.

This approach is operationalised through the use of household survey data to identify the class positions and material conditions of individuals and households. A typology of class

positions is defined, which seeks to capture the essential characteristics and specificities of the countries' class structure in a parsimonious way. As explained below, individuals are classified according to whether they own capital (conversely, whether they need to sell their labour-power), whether they have command over and make use of scarce skills (conversely, whether they are restricted to low-skilled occupations), and whether they are protected by the prevailing labour laws (i.e. the formality or not of the employment relation). This typology comprises eight positions, which allow for differences amongst employers and amongst workers, and also includes pensioners and the unemployed.

The typology of class positions anchors the analysis of inequality, beginning with an income-source decomposition of household per capita income inequality that is applied to the whole period under study. The main sources of income are those based on the identified class positions (e.g. professional salaries and pensions, related to professional workers and pensioners), with the addition of social security benefits and other forms of income depending on the structure of the database for each country. This casts a first light on changes to the overall structure of inequality and its determinants. As an example, it is found that in both countries the largest swings in income-sources were the increase of formal, low-skilled wages, in detriment of their informal counterpart

Going further, the presence of the same sources identified above is investigated along percentiles of the whole distribution of household per capita income, for several points in time. This procedure reveals how the social reproduction of households at different segments of the income-ladder changed or not over time, insofar as their main sources of income are concerned. For example, the empirical results underscore the relevance of increased social security benefits (particularly CCTs) for households at the bottom quartile, and of rising MWs and labour formalisation for those in the second to third quartile.

The third step decomposes the overall Gini index of household per capita income inequality through the ANOGI method, with households classified according to the class typology. The key question the method addresses is how total inequality can be split into income differences *between* and *within* classes (e.g. how much is related to the income gap between workers and capitalists and how much is related to the dispersion of wages). The method also conveys important information about the position of all class fraction vis-à-vis each other, including the degree to which their income ranges overlap and how they are ranked against each other and in the overall distribution. By employing it over time, the method shows whether the movements in inequality were more related to changes in the relation between class fractions (i.e. between-class inequality) or to developments internal to individual fractions (i.e. within-class inequality). Furthermore, the indicators developed

in this thesis cast light on the drivers of falling inequality and their eventual stagnation, indicating which relations, and between which class fractions, were the most relevant ones. This analysis thus indicates the winners and losers throughout the analysed period and better clarifies the position of different class fractions in the pattern of accumulation. In sum, it offers a deep description of how the living conditions of the different class fractions and the relations between them evolved over time.

The class structure of a social formation, in this thesis, is understood as a constitutive element of the mode of production, extraction, accumulation and distribution of value and surplus-values, which can be approached at different levels of abstraction. For the purposes at hand, two levels are sufficient. At the most abstract, it is the embodiment or instantiation of the basic relations of production and distribution, which ascribes class-belonging to groups of individuals and their members based on the relations they entertain between each other and to the means of production. This is aptly summarised by Ste. Croix:

> 'class ... is the collective social expression of the fact of exploitation, the way in which exploitation is embodied in a social structure ... Class is essentially a relationship—just as capital ... [is] "a relation", "a social relation of production", and so forth. And a class (a particular class) is a group of persons in a community identified by their position in the whole system of social production, defined above all according to their relationship (primarily in terms of the degree of control) to the conditions of production (that is to say, to the means and labour of production) and to other classes ... Class conflict (class struggle, *Klassenkampf*) is essentially the fundamental relationship between classes, involving exploitation and resistance to it, but not necessarily either class consciousness or collective activity in common, political or otherwise ...' (Ste. Croix 1984: 100)

Class is thus, at its most fundamental, an economic relation, and one which is present from the most abstract to the most concrete levels of a social formation. In this sense, the basic definition offered above can be further specified in the economic dimension, as is done below, but also in other spheres of social reproduction. Traditions, consumption habits, and other 'cultural' characteristics can thus be associated to particular classes in more concrete studies, but their presence or not, which is an empirical matter, does not bear upon the existence of class as a social and economic structure. Likewise, political mobilisation, class identity and the particular activities of social forces organised around class lines are further developments, whose actual existence is a time- and place-specific phenomenon, but not the causal mechanisms that bring a class structure into being. Although this study engages

but briefly with these other dimensions of class, the important point is that they are more complex developments of the concept, and not part of their definition.

At a second and more concrete level of abstraction, but still fundamentally within the economic dimension, the class structure can be specified based on a set of more developed social relations of production. Engaging with the works of Erik Olin Wright (1985, 1989, 1997), this thesis develops a class typology, adapted to the reality of Brazil and Argentina, which extends beyond the two-class model of capitalists and workers. Given the goal of using the typology to cast light on the structure of income inequality, the core issue that justifies this development is the need to account for relations of production that produce relevant income gaps between the class fractions they define. In this vein, it is a matter of locating these relevant processes which differentiate capitalists and workers in their relations with each other, leading to the identification of fractions of the two fundamental classes. The resulting structure, defined by the position of the class fractions in the overall pattern of accumulation, is a fundamental determinant of the distribution of income, both as regards the gaps between fractions and the distribution internal to each one.

The typology developed in this thesis accounts for three further relations, beyond the basic distinction of owning capital as opposed to having to sell one's labour-power. The first introduces a differentiation into the patterns of capital ownership, discriminating between large and small employers. Whereas the owners of large capital receive profits, mostly without contributing with labour of their own, small employers tend to receive mixed income and have substantially different overall economic dynamics. The second and third account for the heterogeneity of workers, leading to three class positions. The possession or not of scarce skills affects the relationship between workers and their employers, giving relatively more advantageous conditions for high-skilled workers to sell their labour-power. This defines the fraction of professional workers.[21] As for low-skilled workers, a distinction is made that accounts for a central feature of Latin American labour markets, which is that of being covered or not by labour standards and the prevailing legislation – i.e. informality. This leads to the positions of formal and informal low-skilled workers.

Besides these five 'core' positions, three other fractions are identified. In the case of Brazil, there is a non-negligible contingent of workers who do not receive any monetary income from their activities, in most cases because they work for self-consumption (either as small rural producers or building their own houses). They are hence considered workers for self-consumption. The unemployed, or the population not absorbed as workers by the pattern

[21] Roughly, this corresponds to the distinction in the Marxist literature between simple and complex labour-power. Importantly, the relevant point is for the worker to be in a high-skilled occupation, and not to have a certain level of formal education, as the occupation is what defines the complexity of the labour performed and hence the relation between employer and worker.

of accumulation, are also considered as a separate class fraction. The final class position comprehends pensioners, i.e. previous workers. No differentiations are introduced into the unemployed or pensioners, as data restrictions do not allow one to identify with clarity which fraction of the working class they belong(ed) to.

The typology developed captures the key dimensions of the Argentinean and Brazilian class structures, subject to data availability, whilst remaining sufficiently small to allow for detailed analysis of individual fractions. As a result, confirmed in the empirical part of this thesis, the typology casts light on the determinants of income inequality, seen in relation to how the pattern of accumulation of the two economies evolved during the studied period.

More specifically, using data from the National Household Sampling Survey (*Pesquisa Nacional por Amostra de Domicílios*, PNAD), in the case of Brazil, and of the Continuous Permanent Household Surveys (*Encuesta permanente de hogares contínua*, EPH-C), in the case of Argentina, the identification of class positions is based on four main individual-level variables. These are the person's position in the occupation, the skill level required for their occupational category, the number of employed workers (for employers), and whether the individuals are covered by social security.

These four main variables that define the class typology are treated in the following way. The position in the occupation is classified into five categories: employers, self-employed, formal employees, informal employees,[22] and unwaged workers or workers for self-consumption. The occupations were classified according to the skill level they required, into either professional or low-skilled ones. For individuals classified as employers, a distinction was made in terms of the number of employees, differentiating between those who employed ten or less workers or more than ten. The number ten was chosen strictly due to data restrictions, as this is the largest informed value for this question in the PNADs. This is, of course, a far cry from a theoretical definition of what constitutes a large employer or a capitalist in contemporary Latin America, so the results must be interpreted with caution. Finally, access to social security was considered positive when either the person was in a formal employment relation, which guarantees state pensions (and health treatment in Argentina), or when she contributed to a private pension scheme.

[22] In Brazil, formal employees are those who have a formal work contract ('*carteira assinada*' and civil servants). In Argentina, formal employees are those for whom the employer makes the appropriate health and social security contributions ('*obra social*'). The results in Argentina are virtually indistinguishable if other associated markers of formality are used, such '*descuento jubilatorio*'.

Having identified the class position of individuals, to identify that of households as a whole the following sequential process is adopted:

1. If all working individuals are of the same class position, then this is the class of the household;
2. If 1. does not hold, and if the head of the household works, then his or her class is ascribed to the household;
3. If 1. and 2. do not hold, and if there are working individuals in the household, then the most common class position is ascribed. In case of a tie, then the 'highest' class is selected (large employers over small employers, over professionals...);
4. If there are no workers in the household, and if there are pensioners in it, then it is classified as a pensioner household;
5. If there are no workers or pensioners in the household, and there are unemployed or inactive persons in it, then it is classified as an unemployed or inactive household;

Taken together, these variables define the following positions, summarised in Table 2.1:

1. Large employers: those who employ more than 10 workers. This is the most privileged position, based on the command over relatively large amounts of labour, and is consequently the one most concentrated at the top of the income distribution. Even if the data used severely underreport their income, as household surveys are known to do, large employers can nevertheless still be found at the very top of the distribution.
2. Small employers: employers of 10 or less employees, this is an intermediate position based on commanding a smaller amount of labour. In practice, they mostly receive mixed income, due to their own work as supervisors or managers. They compete from a disadvantageous position with larger capitals, whilst still depending on the labour of others – who are, in general, informal workers.
3. Professional workers: employees or self-employed workers in high-skilled occupations. They are also an intermediate position, which must still sell their labour-power but can do so at relatively more advantageous conditions, given their possession of scarce skills. Professional workers and small employers are the middle-class of Brazilian and Argentinean society, what Wright refers to as 'contradictory locations within class relations'. The relations into which they are inserted allow for some degree of privilege and social mobility, whilst denying them the power capitalists enjoy, based on which their alliances and struggles tend to oscillate with the conjuncture.

4. Low-skilled, formal workers: formal employees or self-employed workers that contribute to social security, in low-skilled occupations. This group has to sell their labour-power for a living without the bargaining power that scarce skills offer, but are covered by basic labour laws and social protection. Although there is considerable fluidity between formal and informal positions, given that individuals frequently shift between them, there are two key distinguishing elements: full-time formal workers are paid at least the minimum wage, and they tend to enjoy better work conditions, more rights and comparatively more advantageous conditions in struggles, particularly when unionised.
5. Low-skilled, informal workers: informal employees or self-employed workers that do not contribute to social security, in low-skilled occupations. These are the most precarious workers, as they do not possess scarce skills and are not even covered by the prevailing labour legislation. Together with their formal counterpart, these two groups are the backbone of the Brazilian and Argentinean social structures, responding for about 70 to 80% of the population and contributing with the largest part of the labour-power sold.
6. Unwaged or self-consumption workers: workers whose productive activities are for self-consumption or who do not receive monetary income from their activity. They are a small segment of the overall working population in Brazil, but still relevant. In Argentina, partially because the database only covers urban areas, they are not included as a separate class fraction.
7. The unemployed or inactive: those classified as looking for jobs but unable to find them during the reference period, or households without any members in the labour market. This is the most destitute group, incapable of entering into paid employment and relying, when available, on social security and cash transfers.
8. Pensioners: former workers who receive private or state pensions.

Table 2.1 Definition of class positions

Class position	Position in the occupation	Occupational category	Size of the company	Access to social security (pensions)
Large employers	Employer	Irrelevant	>10 employees	Irrelevant
Small employers	Employer	Irrelevant	<=10 employees	Irrelevant
Professional workers	Self-employed, Formal employee, Informal employee	High-skilled	Irrelevant	Irrelevant
Low-skilled, formal workers	Self-employed, Formal employee	Low-skilled	Irrelevant	Yes
Low-skilled, informal workers	Self-employed, Informal employee	Low-skilled	Irrelevant	No
Self-consumption*	Self-consumption, unwaged	Irrelevant	Irrelevant	Irrelevant
Unemployed or inactive	Unemployed or inactive	–	–	Irrelevant
Pensioners	–	–	–	Yes

Note: *: this class fraction is not defined for Argentina.
Source: Prepared by the author.

It should be noted that, in terms of its operationalisation, the scheme developed here resembles other typologies based on diverse theoretical frameworks, both more general ones and those designed with Latin American specificities in mind (for an overview of the different foundations of class typologies, see the contributions in Wright 2005). It has been noted in the literature that several broad typologies, such as the neo-Weberian Erikson-Goldthorpe-Portocarero (EGP) scheme (Erikson and Goldthorpe 1992, Erikson *et al.* 1979), Olin Wright's neo-Marxist schemes (Wright 1985, 1997), or the more disaggregated neo-Durkheimian ones developed by Grusky and Sørensen (1998), in spite of their theoretical differences, tend to have similar operationalisations when applied to large surveys (for a data-focused review, see Connelly *et al.* 2016). Closer to the object of this study, some relevant schemes are those that Portes and Hoffman (Portes 1985, Portes and Hoffman 2003) applied to Latin America as a whole, and the one that Figueiredo Santos (2005, 2015) developed for Brazil and has since then seen further usage (Carvalhaes and Souza 2014, Souza and Carvalhaes 2014).[23] There are, of course, differences between these class schemes, which depending on the object of study might be relevant, but their broad outlook is similar. The main reasons for this instrumental comparability are the constraints of the databases, in terms of the information they provide, and of the statistical procedures used to capture class relations.

[23] The analysis Saad-Filho (2014) does of the political and social features of the Brazilian class structure uses the typology most similar to that of this thesis.

There are two main differences, one instrumental and one theoretical, between the class typology used in this thesis and the others discussed above. In instrumental terms, this typology is much leaner than most – compared, for example, to the 13 positions of that developed by Figueiredo Santos (2005). Nevertheless, it accounts for key determinants of inequality, without significant losses in explanatory power compared to the larger typologies.[24] The second and key difference regards how the results must be interpreted. The class typologies discussed above have all got their own theoretical bases, which lead to different explanations of the observed empirical results, however similar they might be in certain applications. In the case of this thesis, as explained above, the class structure is determined by the socioeconomic relations of production between class fractions, so the analysis of class inequality must be founded upon that of the dynamics of accumulation. This is a further reason to opt for a manageable typology, which can thus explain the obtained results by adequately locating them in the overall framework.

2.4. Decompositions of the Gini index and the ANOGI method

As explained above, this thesis uses income-source and group-wise decompositions of the Gini index to study changes to the structure of inequality in Brazil and Argentina. The income-source decomposition is well known, so it is presented only briefly here. As for the ANOGI decomposition, not only is it a less-known method, but this thesis develops extensions to it, so it is presented at greater length. Specifically, this thesis proposes indicators for how inequality reacts to changes in the population-share and in the relative income of sub-populations. Importantly, the use of these novel indicators corrects for frequent mistakes in the literature studying the effects of labour formalisation using income-source decompositions (e.g. Amarante 2016, Judzik *et al.* 2017, Keifman and Maurizio 2012, 2014), an important theme in Latin America (this is explained below and exemplified in chapter 6).

2.4.1. The income-source decomposition of the Gini index

The exposition of the income-source decomposition of the Gini index is based on Lerman and Yitzhaki (1985) and Hoffmann (2013a). Consider there are f income-sources,

[24] Tests were carried out, for Brazil, to compare the explanatory power of Figueiredo Santos's typology and the one used in this thesis. Using the ANOGI method (explained below) to decompose household per capita income inequality arrives at very similar results for both typologies, in terms of the within- and between-group structure of inequality. This leads to the conclusion that not much is gained by adopting the more complex version of Figueiredo Santos.

indexed by *g*, which assume value 0 for individuals who do not receive them, so that the *i*-th individual's total income, y_i, equals the sum of her *f* income-sources. Therefore, $y_i = \sum_{g=1}^{f} y_i^g$, and let s_g be the share of the *g*-th source in total income. Furthermore, let F_i be the rank of individual *i*, normalised to lie between 0 and 1. The overall Gini index, *G*, then equals:

$$(1.3) \quad G = 2\mathrm{cov}\left(y_i, F_i\right)$$

The concentration of each income-source, C_g, can in turn be expressed as:

$$(1.4) \quad C_g = 2\mathrm{cov}\left(y_i^g, F_i\right)$$

where the individuals are ranked according to their position in the overall distribution of income (as opposed to in the distribution of the *g*-th source). Income-sources with a concentration index above that of the overall Gini index are concentrated with regards to total income, and vice-versa. Based on this, a progressivity index τ_g can be defined which takes positive values for relatively non-concentrated income-sources (i.e. progressive ones) and vice-versa:

$$(1.5) \quad \tau_g = G - C_g$$

The decomposition then follows as an average of concentration indexes, weighted by their respective income-shares s_g:

$$(1.6) \quad G = \sum_{g=1}^{f} s_g C_g$$

This simple decomposition is a powerful tool to analyse how inequality is structured across income-sources, as it identifies their relative concentration and weight in the distribution of income. When applied over more than one time-period, this decomposition is also a widely used tool to identify drivers of the distribution of income. This is done by means of a dynamic version, which uses a shift-share method to arrive at two effects: the share effect, which measures the impact on inequality of changing income-shares, and the concentration effect, which measures the impact on inequality of changes in the concentration of each source in relation to total income (a three-term version can also be defined):

$$(1.7) \quad \Delta G = G^{t=1} - G^{t=1} = \sum_{g=1}^{f} \Delta s_g C_g^* + \sum_{g=1}^{f} s_j^* \Delta C_g$$

where the * superscript identifies the average value of a variable over the two time-periods being compared, e.g. $C_g^* = 0.5\left(C_g^{t=0} + C_g^{t=1}\right)$. This income-source decomposition presented in equation (1.7) is a standard tool in the inequality literature for Latin America, and has

led to key contributions (see, amongst others, Amarante 2016, Hoffmann 2009, 2013b, Hoffmann and Oliveira 2014, Judzik *et al.* 2017, Keifman and Maurizio 2012, 2014).

Equation (1.7) is not adequate, however, to measure the impacts of labour formalisation or, more generally, processes that involve the transition from two mutually exclusive sources of income, for the following reason. The first term of equation (1.7) expresses the impact on inequality of changes in the income-shares of the *g* sources, but it cannot distinguish between two processes that might affect income-shares: the scaling of existing incomes and the change of coverage. On the one hand, s_g might increase or decrease through a scaling up or down of the flows it comprehended at a given point in time, without it being extended to individuals who did not receive such income (e.g. the government doubles the value of all existing cash transfers, but does not increase their coverage.) On the other hand, s_g might vary if a greater or smaller number of individuals start to receive the income-flow represented by y^g (i.e. its coverage of the population changes). Furthermore, the change of coverage of s_g might happen through a substitution between two mutually exclusive sources of income, such as someone no longer receiving unemployment benefits because they became employed. The decomposition expressed in (1.7) cannot distinguish between these two sorts of causes (greater coverage as opposed to higher mean value), as both lead to changes in s_g.

This problem of interpreting the results of (1.7) is clear for the case of labour formalisation. An individual's main job is either formal or informal, so if two wage-sources are discriminated relative to their formality status they are mutually exclusive income-sources. As formal wages tend to be less concentrated internally, have higher mean values, and be less present in the bottom of the overall distribution of income as compared to informal wages, their concentration index relative to total income is higher (see the empirical results in chapters 4 and 6). In this scenario, decreasing the income-share of informal wages, as assessed through (1.7), would be taken as an income-concentrating phenomenon. If, however, the actual process that led to the decrease of the income-share of informal wages was labour formalisation (i.e. a transition into formality), the expected result would be for total inequality actually to decrease (and mean income to rise), as the empirical results of this thesis indeed confirm. To measure this impact of a transition between income-sources in the context of decompositions of the Gini index, however, the indicators developed in section 2.4.4 are needed.

2.4.2. Gini decompositions by sub-populations: a brief review

With a growing number of works advancing proposals for decompositions of the Gini index (e.g., Dagum 1997, Mornet *et al.* 2013, Mussard and Richard 2012, Mussini 2013c, Okamoto 2009, Yitzhaki 1994), it is now a long way since it could be said that the 'interaction term' in group-wise decompositions 'is impossible to interpret with any precision, except to say that it is the residual necessary to maintain the identity' (Mookherjee and Shorrocks 1982: 889). It is reasonable to suppose that this research agenda has expanded for two reasons. First, the Gini index remains the most widespread measure of inequality, particularly of income and wealth, and so it is only natural that decompositions of inequality should focus on it. Second, as Lambert and Decoster (2005) aptly put it, 'the Gini coefficient reveals more'. That is, it offers a deeper breakdown of how inequality is structured across and within sub-populations than, say, the generalised entropy index. Essentially, this occurs because the relation between members of different groups is also taken into account, instead of representing groups only by their mean values, so it is possible to gain insight into their interaction and, hence, into issues such as stratification. This becomes particularly relevant when distributions are non-normal, as is usually the case with income and wealth.

Given these advantages, several decompositions of the Gini coefficient have been proposed and applied to a variety of cases. This thesis engages with a particular group-wise decomposition, ANOGI (Frick *et al.* 2006, Yitzhaki and Schechtman 2013), and offers two developments. First, it proposes a measure of each group's share of total inequality that includes their contribution to between-groups inequality. Second, and most important, it develops indicators of the sensitivity of inequality and its components to changes in group sizes, when longitudinal data are absent. This is a relatively unexplored topic, of practical relevance in several fields such as studying the (un)equalising effects of changes in employment status (such as formalisation of labour or the increase of self-employment), of geographical migration and of the growth of a particular demographic. These results are contrasted to the sensitivity of inequality to changes in groups' mean income, the indicators for which are developed based on Wodon (1999).

The key issue in group-wise decompositions of the Gini index is how to deal with the fact that it is not neatly decomposable into a between- and a within-groups component, with a third term (which is sometimes later merged into the others) necessarily arising (Pyatt 1976). This overlapping, interaction or 'transvariation' element is simultaneously at the heart of the Gini coefficient's advantages, offering further information about how the groups relate to each other (Lambert and Decoster 2005), and the main reason why several authors prefer other, more easily decomposable indices (Mookherjee and Shorrocks

1982). Most of the literature on decompositions of the Gini has revolved around how to (re-)define and interpret this element coefficient into subpopulations (Deutsch and Silber 1999).[25]

It is possible to classify the proposed decompositions into three broad groups. The first, as in Bhattacharya and Mahalanobis (1967), seeks to maintain only two terms in the decomposition, including the overlap element into only one of them. This will, however, distort the concepts and at least one of the components will not adequately measure its goal. The second group can be associated with Pyatt (1976), which offers initial propositions for both between- and within-groups inequality, but leaves the third term as a residual whose meaning is hard to pin down.[26]

The third group of decompositions offers a set of analytically richer options, as it redefines the overlapping component to develop a socioeconomic interpretation of all the resulting terms and usually offers adjusted versions of between- and within-groups components. Two of them have arguably become the most popular ones in recent years, Dagum's (1987, 1997)[27] and Yitzhaki and Lerman's (Yitzhaki 1994, Yitzhaki and Lerman 1991), later developed into ANOGI (Frick *et al.* 2006, Yitzhaki and Schechtman 2013).[28] Whilst Dagum introduces the extended Gini between subpopulations, ANOGI is based re-ranking individuals according to the other groups and to the whole population, leading to an overlapping index (the inverse of stratification) and a modified between-groups pseudo-Gini.[29] The result is a four-term equation, measuring within-groups inequality, the effect of overlapping on the latter, between-groups inequality, and the effect of overlapping thereon. It can be reduced to a two-term format, which will then measure overlapping-adjusted within- and between-groups inequality.

ANOGI has seen several empirical applications with powerful results, particularly as regards stratification and the integration of different communities in unequal societies.[30]

[25] The most wide-ranging and systematic coverage of the different decomposition, including comparison with other inequality measures, is in Deutsch and Silber (1999), even if it does not cover recent forays into multi-decompositions and the like. Giorgi (1990, 1993) presents the history of debates around the coefficient, and other authors discuss various proposals for decompositions as they present their own (e.g. Lambert and Decoster 2005, Yitzhaki 1994, Yitzhaki and Schechtman 2013).

[26] Although Lambert and Decoster (2005) have provided an extensive discussion of the behaviour of the interaction term, determining under which conditions it will rise or fall, a decomposition that attaches clear meaning to it is nevertheless much easier to interpret.

[27] For recent developments of this approach, see the multi-decompositions in Mussard and Savard (2012) and Mussini (2013a), as well as Mussini (2013b, 2013c), who offers a version specific to longitudinal data.

[28] For a discussion of the differences between Dagum's and Yitzhaki and Lerman's proposals, see Yitzhaki (1994). The arguments can be carried over to ANOGI without much loss.

[29] A somewhat similar, though independent, approach can be found in Sastry (1994).

[30] Other uses include Frick *et al*. (2006) and Ceccarelli and Giorgi (2009), who studied attrition in longitudinal surveys, focusing on the overlapping parameter to see if different time-cohorts constitute

Ceccarelli *et al*. (2014) and D'Agostino *et al*. (2016) have looked at the integration of immigrants in Italy, pointing to greater inequality and stratification since 2008, whilst Frick and Goebel (2008) showed a persistent income divide between East and West Germany. Agrawal (2014) and Zacharias and Vakulabharanam (2011) studied rural-urban and caste inequality in India, whereas Castellano *et al.* (2016) analysed the occupational stratification of income in France and Italy. Staple topics in the field, such as worldwide income inequality, have also benefited from the approach. For example, Liberati (2015) analyses world income between 1970 and 2009 to show how there has been a recent increase of within-country inequality, counterbalanced by a decrease of between-country inequality led by rising income in China.

One dimension that has not been explored, however, is a measurement of how total inequality and its components react to changes in the sizes of the subpopulations. If there is access to panel data, it might be possible to directly study the mobility of individuals between groups, such as in Yitzhaki and Wodon (2004) or in some multi-decompositions following Dagum's tradition (Mussard and Savard 2012, Mussini 2013b, 2013c). If such data are not available – an all-too-common feature of poor countries – or if mobility is impossible (e.g. how does labour income inequality react to greater female labour market participation), a different measure is called for. Will higher immigration increase or decrease inequality and stratification? How does self-employment impact inequality and the heterogeneity of workers? Which group's increase will have the strongest impact on inequality? These are the sorts of questions that such a measure can help to address.

2.4.3. Measuring each group's contribution to total inequality in the ANOGI framework

For a more detailed exposition of the method and proofs in what follows, please consult Frick *et al*. (2006) and Yitzhaki and Schechtman (2013). Consider a population comprising k mutually-exclusive groups with n_i members each, who receive non-negative income y. The overall population is denoted by the subscript U. Let μ_i be the mean income of group i, so that $p_i = \frac{n_i}{n_U}$, s_i and $\eta_i = \frac{\mu_i}{\mu_U}$ are respectively the population-share, the income-share and the relative income of group i. Let $F_i\left(y_i\right)$ represent the cumulative distribution of y in group i. F_i, with a single subscript, indicates the expected value of $F_i\left(y_i\right)$ – estimated in the sample by the rank of observations, normalised to be between 0 and 1 – and F_{ji}, with two subscripts, indicates the expected rank of individuals from group i had their income been ranked according to the distribution of group j (note the order of the notation).

separate strata according to several variables (income, satisfaction etc.), and whether there are learning-effects due to repeated sampling.

The overall Gini index, *G*, can then be decomposed into four terms:

$$(1.8) \quad G = G_{IG} + G_{IGO} + G_{BP} + \left(G_B - G_{BP}\right) = \sum_{h=1}^{k} s_h G_h + \sum_{h=1}^{k} s_h G_h \left(O_h - 1\right) + G_{BP} + \left(G_B - G_{BP}\right)$$

where G_i is the intra-group Gini index of group *i*, O_i is the overlapping parameter of group *i* (see below), and the following indices are:

1. G_{IG}: pure within-groups inequality, it is an income-share-weighted average of Gini coefficients calculated over members of each group, disregarding overlapping;
2. G_{IGO}: the same as above, but multiplied by the overlapping indices minus 1, to assess the impact that overlapping (less-than-perfect stratification) has on within-groups inequality;
3. G_{BP}: the pure between-groups Gini coefficient, which disregards overlapping. It is the Gini index that would obtain had all individuals received the mean income of their group;
4. $\left(G_B - G_{BP}\right)$: G_B is the overlapping-adjusted (pseudo-)Gini for between-groups inequality, calculated as though all individuals received the mean income of their group, but, differently from G_{BP}, the groups are represented by the mean rank of their members (and not their rank in the population of group-mean incomes). $\left(G_B - G_{BP}\right)$ then measures the impact of overlapping on between-groups inequality.

O_i in turn is a measure of how much are the distributions of all groups contained in that of *i*. It is the population-share-weighted average of the group-by-group overlapping parameters, O_{ji}, which measure how much the distribution of group *j* is contained in the range of *i*:[31]

$$(1.9) \quad O_i = \sum_{h=1}^{k} p_h O_{hi}$$

Equation (1.8) can also be simplified into two terms, by adjusting both the within-groups and the between-groups components for overlapping. This leads to the following formulation:

$$(1.10) \quad G = G_{WO} + G_B = \sum_{h=1}^{k} s_h G_h O_h + 2\sum_{h=1}^{k} p_h \dot{\eta}_h \dot{F}_{Uh}$$

where the dot accent represents deviation from the expected values for the overall population, so that $\dot{\eta}_i$ stands for the *i*-th group's deviation from mean relative income $\left(\eta_i - 1\right)$ and $\dot{F}_{Ui}$ for its deviation from mean rank, assessed according to the overall population $\left(F_{Ui} - 0.5\right)$.

[31] The mean rank parameter can also be expressed as the population-weighted average of group-by-group mean rank parameters.

Before developing the group-sensitivity measures, a different presentation of (1.10) can shed light on each group's contribution to total inequality. By substituting the income-share for the product of each group's population-share and relative income, we arrive at this formulation that puts the population-share in evidence:

$$(1.11) \quad G = \sum_{h=1}^{k} p_h \left(\eta_h G_h O_h + 2\dot{\eta}_h \dot{F}_{Uh} \right) = \sum_{h=1}^{k} p_h G_h^C$$

Where G_i^C is the *i*-th group's contribution to *G*. This shows how the Gini coefficient can be expressed as a population-share-weighted sum of each group's overlapping-adjusted intra-group Gini coefficient, multiplied by its relative mean income, and their contribution to between-groups inequality, in turn a function of deviations from mean relative income and mean rank. Some elements of this expression are intuitive: the more representative is a group in terms of population $\left(p_i \right)$, the more concentrated amongst its members is its income $\left(G_i \right)$ and the higher its relative income $\left(\eta_i \right)$, the higher will be its contribution to the overall Gini through the within-groups component. The multiplication by O_i, however, might be harder to grasp. It essentially indicates that, other things equal, subpopulations constituting a well-defined stratum contribute less to within-groups inequality.[32] Analysing the second term, it is possible to see that even if a group's income is fairly de-concentrated amongst its members, if it is located at the top of the distribution it might still add significantly to total inequality through the between-groups element. In fact, this is the 'perfect' setting for a high contribution to the latter: being a cohesive group located at the top of the distribution, so that $\dot{\eta}_i$ and $\dot{F}_{Ui}$ are large. Likewise, groups at the bottom of the distribution also tend to increase the between-groups component, given that $\dot{\eta}_i \dot{F}_{Ui}$ also rises.

Expression (1.11) is the appropriate way of assessing each group's contribution to total inequality. This is different from the path Yitzhaki and Schechtman (2013: 317) and Milanovic and Yitzhaki (2002) take, for example, as they only consider the first term $\left(p_i \eta_i G_i O_i \right)$. Only taking $\left(p_i \eta_i G_i O_i \right)$ into account, however, disregards the between-groups dimension of inequality, and hence incorrectly measures each group's contribution to overall inequality. Given that between-continent inequality accounts for about half of total world income inequality, this is a serious issue.

The importance of this point can be seen as, in the case of Milanovic and Yitzhaki (2002), qualitatively different conclusions arise with the adequate measurement of each region's contribution to world income inequality in 1993. The authors state that 'Asia is the most important contributor to world inequality: it contributes with around 0.20 to the Gini

[32] Naturally, although intra-group concentration might vary without impacting O_i, overlapping is in general not independent of the spread of observations, so the precise relationship between stratification and within-groups inequality cannot be spelled out at length in a general fashion.

index, which is almost one-third of total world inequality, and 57 percent of intra-continent inequality' (Milanovic and Yitzhaki 2002: 164). Using the same data and assessing shares according to (1.11), however, Western Europe, North America and Oceania (WENAO) are seen to represent about 77% of between-groups inequality, which, summed to its 18% of intra-group inequality, leads to 46% of total world inequality – above Asia's share of 39%. Therefore, *WENAO, and not Asia, was the most important contributor to world inequality in 1993*, a conclusion which follows from the measurement presented above.

A note of caution in interpreting (1.11) is in order. This equation does not imply that the group whose contribution to inequality is being assessed *causes* the latter. This is a descriptive exercise, which maps overall inequality to the studied groups, and not an attribution of causality. A poor group will, for example, also enter with a positive sign, and this does not imply they are the causal agents behind this. What it indicates is that the existence of the group at hand, positioned as it is against other subpopulations (its contribution to the between-groups element) and with its internal distribution (its contribution to the within-groups component), accounts for a certain share of total observed inequality.

2.4.4. Group-sensitivity indicators

Expression (1.11) shows how the Gini index can be stated as a population-weighted average of group contributions, which will be above or below the resulting overall coefficient. Whilst an important result, analysing a group's disproportionate contribution to total inequality is a different question from investigating whether a marginal increase in its size will lead to a rise or fall in inequality. As Kimhi (2011) comments on income-source decompositions, the latter question is usually of greater relevance to ascertain the progressivity of a stream of income – or, in this case, of expanding a group. Therefore, in what follows this thesis develops group-size progressivity indices, and it adapts to the current framework the progressivity index for group incomes of Wodon (1999), which are similar to the income-source progressivity indices discussed above.

Before presenting the indices themselves, a discussion of the hypotheses behind their validity is required. Whereas scaling up or down a revenue stream is a straightforward process, liable to policy intervention, population-shares present a more nuanced picture. The substantive question, which must be assessed for each specific application, regards the causal processes attached to belonging to the groups and whether they extend to, and are affected by, new members. Throughout the discussion it is assumed that the individuals both leaving and entering a subpopulation are randomly drawn from their respective group distributions. There is thus no selection bias amongst 'exiting' members, and 'entrants' are

subjected to the same forces that determine the income of the group to which they will belong. In this sense, this is not a means-preserving process, and the individual group distributions are not affected by changes in their sizes. Whether this is an adequate set of hypotheses should be judged for each case. In the case of marginal changes to mean income, the key assumption is that there will be no re-ranking of individuals belonging to different groups through this procedure, which implies that the members of different groups do not have exactly equal incomes (or a negligible number of them does so).

Consider, then, a marginal absolute increase θ in the population-share of group *i*, offset by a corresponding decrease in the shares of the other groups. This is a random migration from the remainder of the population, or the independent growth of *i*, so the relative size of all *h* groups $\left(h \neq i\right)$ will remain constant. Therefore, adding and subtracting θ leads to:

$$\begin{matrix} p_i + \theta \\ p_h\left(1 - \dfrac{\theta}{1 - p_i}\right) \forall h \neq i \end{matrix} \tag{1.12}$$

The question, then, is how the Gini index and the components of its decomposition are affected by adding this arbitrarily small θ: $\frac{\partial G}{\partial \theta}, \frac{\partial G_{IG}}{\partial \theta}, \frac{\partial G_{IGO}}{\partial \theta}, ..., \theta \to 0$. As all individual y_i distributions are unchanged by this procedure, several parameters remain constant: the groups' mean income μ_i, their Gini indices G_i, their cumulative distribution when assessed according to other groups $F_j\left(y_i\right)$ and mean rank F_{ji}, as well as the group-by-group overlapping indices O_{ji}. In general, though, the relative income η_i, the overall overlapping parameter O_i and the mean rank in the population F_{Ui} of all groups are affected, as they depend on a population-weighted summation over every group.

The setting is the same for a marginal multiplicative increase in a group's mean income, say $\left(1+\varepsilon\right)\mu_i$. Given the hypothesis of there being no re-ranking, all individual group parameters except for their relative income are unchanged.

The derivation of expressions (1.13) and (1.14) is not presented here, but is available upon request, and the expressions referring to the impact on individual components of the ANOGI decomposition are presented in Appendix 1. It turns out that the impact on the overall Gini of an increase in the size and in the mean income of group *i* are respectively expressed by the following two expressions:

$$\begin{matrix} \dfrac{\partial G}{\partial \theta_i} = \dfrac{1}{1 - p_i}\left(G_i^C + G_i^O - \left(\eta_i + 1\right)G\right), \\ \text{where } G_i^O = \sum_{h=1}^{k} p_h\left(\eta_h G_h O_{ih} + 2\dot{\eta}_h \dot{F}_{ih}\right) \end{matrix} \tag{1.13}$$

$$\frac{\partial G}{\partial \varepsilon_i} = p_i \eta_i \sum_{h=1}^{k} p_h \eta_h \left[\left(G_i O_i - G_h O_h\right) + 2\left(F_{Ui} - F_{Uh}\right)\right] \tag{1.14}$$

It follows that the increase of a group's size impacts the Gini coefficient through two channels. The first is a 'direct' effect, based on its contribution to the overall Gini, G_i^C. The second is through its impact on overlapping (hence the superscript O), expressed in the second term G_i^O. This is the Gini that would obtain by substituting each group's overall overlapping and mean rank parameters, O_h and $\dot{F}_{Uh}$, by those referring to group *i*, O_{ih} and $\dot{F}_{ih}$. If the impact through these two channels is greater than the prevailing Gini (scaled by one plus the *i*-th group's relative income), an increase in the group's size will raise inequality. By looking at the impact on the individual terms of the ANOGI decomposition (see the expressions in Appendix 1), one can also assess how the increase in a group's size restructures inequality within and and across subpopulations.

As for the impact of raising a group's mean income, in equation (1.14), it is an income-share-weighted sum of two differences, both between the *i*-th group and all the others: their overlapping-adjusted intra-group Gini, and their mean rank. The interpretation is straightforward, with the first difference related to within-groups inequality – if group *i* has a higher than average overlapping-adjusted within-group Gini it will increase this component – and the second related to between-groups inequality – if it has a higher than average mean rank, it will raise this component. It should be noted that the first element in (1.14) is the income-share of group *i*, reflecting that multiplying a high-income group's revenue will affect overall income and its distribution more strongly (i.e. increasing a group's income requires resources proportional to its income-share). Therefore, in order to compare the sensitivity of inequality to an equal transfer of resources to each group, (1.14) should be divided by the groups' respective income-shares.

Finally, to assess the impact of migration or income transfers from a given group to another (i.e. only affecting the size or income of the two groups involved), it is necessary to weigh the individual derivatives by the size or income of the groups. This happens because, as the population-share of each group is in general different, an absolute increase in the *i*-th group will impact the structure of the other groups differently than a decrease in the *j*-th $\left(j \neq i\right)$. In the case of income transfers, they can be defined in two ways, which take into account or not the income-share of the receiving group. In the first case, similar to the individual indices unadjusted by the groups' income-shares, an equal proportional increase of the receiving groups' mean income is considered, which implies different absolute transfers for each of the *k* groups. In the second case, an equal absolute transfer of resources is considered, which implies different proportional increases in mean income for each of the *k* groups. The first has a more intuitive interpretation – e.g. if we increase the income of which group by 1%, financed by a decrease of another group's income, will inequality fall the most? However, given that the main purpose of the matrix is to analyse

which marginal transfers impact inequality the most (the 'greatest bang for a transferred buck'), the second version is preferred.

To construct two *k*-by-*k* skew-symmetric matrices **M** and **T**, respectively of the effect on inequality of migration and of income transfers, we can then define θ_{ji} as an absolute marginal decrease in group *j* and an increase in *i*, thus a migration from the former to the latter which leaves the other groups' population unaffected, and ε_{ji} as a marginal multiplicative increase in the income of group *i* entirely offset by a decrease in the income of group *j*. As explained above, these are adjusted by the groups' income-shares, so to arrive at the unadjusted formulation the $\mathbf{T}_{i,j}$ elements must be multiplied by the *i*-th group's income-share. The expressions for these matrices are:

$$\mathbf{M}_{i,j} = \frac{\partial G}{\theta_{ji}} = \left(1 - p_i\right)\frac{\partial G}{\theta_i} - \left(1 - p_j\right)\frac{\partial G}{\theta_j} \tag{1.15}$$

$$\mathbf{T}_{i,j} = \frac{1}{p_i \eta_i}\frac{\partial G}{\varepsilon_{ji}} = \frac{1}{p_i \eta_i}\frac{\partial G}{\varepsilon_i} - \frac{1}{p_j \eta_j}\frac{\partial G}{\varepsilon_j} \tag{1.16}$$

The use of the individual group indices or of the matrices depend on the phenomenon being studied. If individuals are migrating from one group to another, say self-employed workers are becoming employees, then **M** is the appropriate tool, whereas if individuals are being simply being added to a group, e.g. previously inactive persons become self-employed, then the individual indices are in order. Likewise, if a group's income is rising independently of others, such as through higher productivity and wages for a group of workers, the individual income-sensitivity indices should be used, whereas transferring income between groups requires **T** (with adequate attention paid to income-shares). The use of these instruments is illustrated in the development of this thesis, particularly in chapters 4 and 6.

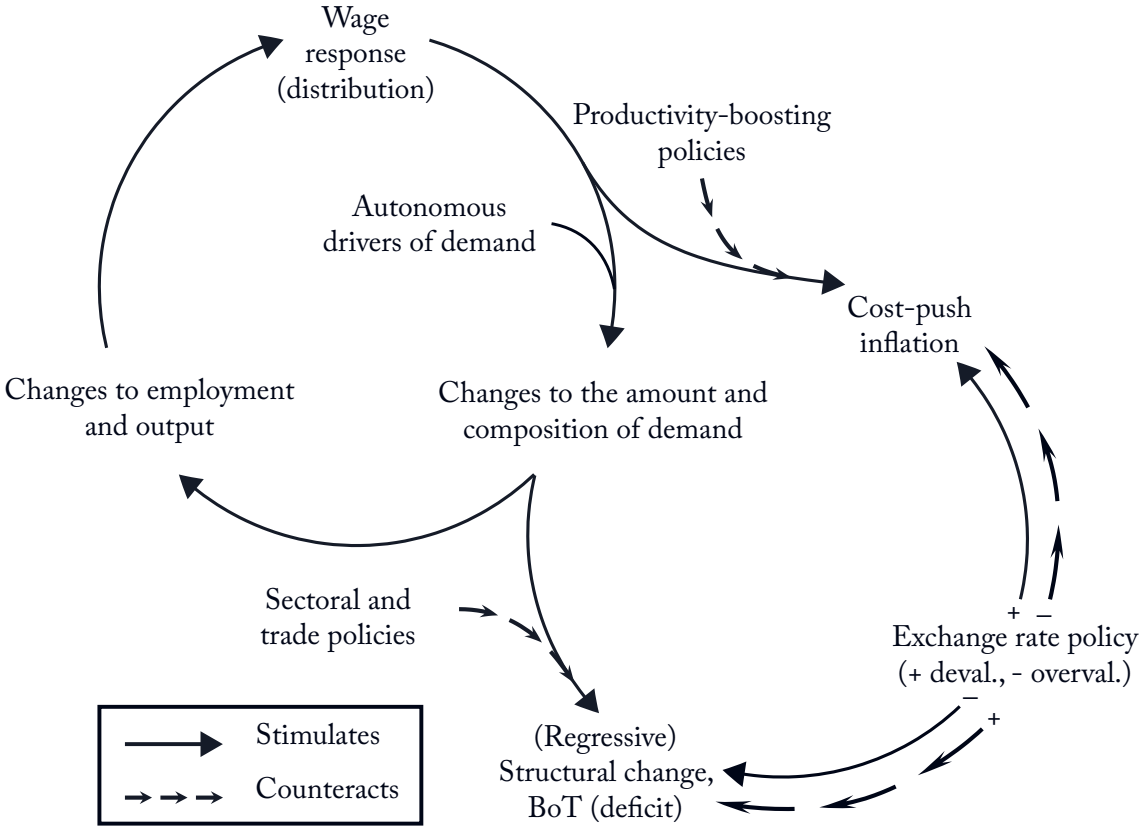
2.5. Bringing growth and distribution together: a cumulative causation framework

It is now possible to spell out the links between accumulation and inequality in greater detail, using a framework through which the experiences of Argentina and Brazil are later analysed and compared (in chapters 3 through 6). The analysis presented in section 2.2 established the demand sources that drove growth, the sectoral dimensions of the latter and how this impacted the basic structures of the labour market. It also gave initial indications of how growth and structural change transformed the balance-of-payments and inflation constraints. The analysis of inequality, in sections 2.3 and 2.4, explored in further depth the determinants of the class structure and cast light on the evolution of

inequality from a class perspective. These dimensions can now be integrated to describe the dynamics of the pattern of accumulation, its growth and redistributive potential, and its central constraints. At this stage, the framework is presented at a descriptive level, and in the analyses of Brazil and Argentina the relevant mechanisms and processes are discussed in light of the empirical results.

A diagram is proposed in Figure 2.1 that, attentive to differences in each country, accounts for the mechanisms that drove growth and redistribution, their endogenous fragilities and the policy trade-offs that arose. This is a more general version, which is later specified with the relevant processes for each country. First, it explains the interconnections between growth, structural change and income distribution, indicating dimensions that would not be visible by studying the processes separate from each other. Second, it highlights the constraints of the pattern of accumulation, and hence the fragilities that would need to be overcome for growth and redistribution to continue. Third, it lays down the policy inputs necessary to countervail these constraints. This framework thus reveals how growth, redistribution and structural change stimulated each other during the ascendant phase of the 2000s and, in so doing, heightened constraints that were not overcome through the development strategies adopted.

Figure 2.1 Basic framework connecting growth, structural change and redistribution



Source: Prepared by the author.

The diagram has two feedback loops. The first explains growth and redistribution by linking changes to the composition of demand, changes to output and employment, and the ensuing changes to labour-market dynamics. The second loop explains how growth and redistribution tightened the economy's constraints, as i) wage gains, particularly in non-tradable sectors, raised inflation; and ii) greater employment in low-productivity sectors decreased the economy's overall productivity, thus reducing foreign competitiveness, and higher domestic income increased the demand for imports, pressuring the balance-of-trade. The exchange-rate policy describes a trade-off between these two constraints, as an appreciation of the exchange rate can reduce inflation but will raise foreign deficits (and vice-versa). In both loops, policies and autonomous factor that could either accelerate or dampen both feedback loops are also included.

Beginning with the upper-left loop, changes to the sectoral composition of demand are in the centre. Their endogenous determinants are explained below, whilst there are two main groups of exogenous drivers. Domestic policies to boost demand are the first, which can be a redistribution benefitting groups with a higher marginal propensity to consume, exogenous increases of household income, or a fiscal impulse. The main forms these took were, respectively, CCTs, MW hikes, and different fiscal policy stances, which, depending on the time and country, included public investment, tax exemptions, civil servants' pay rise and similar measures. The second group of exogenous determinants regards the global price and demand for the countries' exports. As the studied period includes the rise and wane of the commodity boom, as well as the global financial crisis and its unfolding, there were substantial variations in this set of drivers. The overall direction and intensity of exogenous shifts in aggregate demand, including their sectoral composition, depends on the precise combination of drivers.

These autonomous factors change the volume and composition of effective demand, and hence bring forth a series of knock-on effects. Output thus rises, alongside the employment needed to produce the goods and services demanded. This demand for labour, and the skill level of this labour-force, depends on the basket of goods whose demand increased (which in turn depends on the sectoral composition of effective demand). The labour market then responds to this, with higher wages and possibly labour formalisation for the categories of workers being sought. The distributional impact of these changes to the labour market depends on the characteristics of the production processes of the goods and services being demanded, in terms of their labour-intensity and mix of skill levels. Finally, higher compensation for workers stimulates a fresh round of increases in aggregate demand, restarting the cycle. As argued in chapters 3 through 6, this process comprehended a self-reinforcing cycle in which income redistribution increased the demand for labour-

intensive wage-goods, leading to wage gains and labour formalisation, in turn further redistributing income.

The bottom-right loop focuses on two of the key constraints that arose in these patterns of accumulation, as justified above and in light of the empirical results: inflation and the balance-of-payments. The dynamics of a heated labour market, an endogenous result of the previous loop, cause an uptick in cost-push inflation. The inflationary pressure will be higher if wage gains are concentrated in non-tradable sectors, given that the latter are more prone to pass over costs to prices. In the bottom part, changes to the pattern of the demand, as they produce a response in terms of employment, will lead to structural change. To the extent that low-productivity, labour-intensive sectors increase their employment-share, a regressive structural change takes place. This negatively impacts the balance-of-trade, as it decreases the economies' global productivity and foreign competitiveness. Furthermore, regardless of the direction of structural change, domestic growth will in itself increase the demand for imports, which might pressure the balance-of-trade if growth is domestic-led.

The movements of the exchange-rate have opposite impacts on the balance-of-trade and on inflation, and hence define a trade-off between these two constraints. On the one hand, if the currency appreciates, cheaper imports of tradable goods alleviate inflation, but this increases trade deficits by raising the demand for imports and by reducing the cost-competitiveness of domestic tradable sectors. If the currency depreciates, on the other hand, this increases the foreign competitiveness of firms in tradable sectors and makes imports dearer, which potentially forestalls regressive structural change and improves the balance-of-trade. A depreciation of the currency raises inflation, however, as higher costs for imports are passed through to domestic prices.

There is a central limit to using the exchange rate as a means to overcome the balance-of-payments and the inflation constraints. Growth and redistribution, in this framework, are dynamic processes that repeatedly raise inflation and pressure the balance-of-trade. To offset the inflationary impact of continual wage gains in non-tradable sectors, it would thus be necessary to have continual appreciations of the exchange rate, which are unsustainable in the longer term. Likewise, it is not possible to indefinitely depreciate the currency to reduce foreign deficits.[33] Furthermore, depreciations – at least in the short term – decrease real wages and the labour-share of income, decelerating income redistribution.

[33] There is a strand of the literature, however, that proposes that maintaining the currency at a stable and depreciated *level* can promote *dynamic* productivity gains that would *continuously* alleviate the identified constraints (Bresser-Pereira 2012a, Damill *et al.* 2015, Frenkel and Rapetti 2008, Habib *et al.* 2017, Missio *et al.* 2017, Rapetti 2013). This is discussed in further detail in chapters 5 and 6, about Argentina. To advance some of the conclusions, this thesis finds no support for this argument.

The exchange rate thus operates a central trade-off, but not one that overcomes these two constraints.

Therefore, in spite of a key role for the exchange-rate, it is necessary to attack the balance-of-payments and the inflation constraints separately to sustain growth and redistribution. The diagram indicates where these inputs would need to operate. On the one hand, it is necessary to foster economy-wide productivity gains, which reduce costs and thus counteract cost-push inflation, such as through public investment in infrastructure. On the other, it is also necessary to conduct industrial policy in a broad sense, which can stimulate technological upgrading, promote a progressive structural change and hence alleviate the balance-of-payments constraint to growth. Failing to do so would jeopardise the medium-term feasibility of the development strategy, as it would leave the countries dependent on uncertain international conditions, such as higher prices and demand for their exports. The effectiveness and the conditions needed to deliver these policy inputs are discussed for the two countries in their respective chapters.

The diagram presented in Figure 2.1 is later specified for Brazil and Argentina, indicating the relevant processes that took place in each country, and is used to compare their development strategies in the Conclusion of this thesis. This allows for the identification of the causal mechanisms behind growth and redistribution, in what is proposed to be a cumulative-causation process, and shows how their very success defined the constraints of the pattern of accumulation. The limits of the PT's and the PJ's development strategies are discussed by showing how each country attempted in different ways to overcome these constraints, but ultimately only succeeding in managing them. The thesis now turns to the two case studies.

3

Accumulation in Brazil during the Pink Tide: domestic-led growth and regressive structural change

3.1. Introduction

Brazil underwent a growth and redistribution process during the 2000s, as shown in this chapter, after two 'lost decades' of economic stagnation and income polarisation (Belluzzo and Almeida 2002, Carneiro 2002). Seemingly flying against the country's entrenched patterns of exclusionary growth, output grew as a broad swathe of social indicators improved during the administrations of the centre-left Workers' Party (PT, *Partido dos Trabalhadores*), under presidents Luís Inácio Lula da Silva (2003-2010) and Dilma Rousseff (2011-2016). Under the particularly permissive conditions provided by the commodity boom and high international liquidity (Medeiros and Cintra 2015, Saad-Filho 2013), euphoria reigned as domestic and international commentators exclaimed Brazil showed the path ahead for middle-income countries. *The Economist*, in its 14 November 2009 issue, showcased this optimism in a 14-page report on 'Latin America's big success story' (i.e. Brazil), illustrated in the cover with an image of Christ the Redeemer taking flight.

But only a few years later, as this thesis is written (June 2018) none of these conditions held any longer: GDP in Brazil was substantially below its value in 2014, unemployment had risen with acute social implications, commodity prices had fallen, and the former president Dilma had been impeached, with few centre-left governments still standing in Latin America. Amidst the ensuing crisis, no real prospects of or political strategies for inclusive growth were to be found.

Yet what explains the incapacity of Brazil embarking on a sustained process of development? What was the connection between the two phases: did the boom period lay the seeds for its own end, or was the downturn an external event that does not speak to insufficiencies of the former? On the – undeniably nuanced – answer to these questions rest major issues for understanding the contemporary possibilities for development, which extend much beyond the Brazilian case. Although specificities and historical particularities played their role, the key mechanisms behind the growth and redistribution episode – as argued below, structural change, the country's insertion in the world market, social security and labour market policies – are highly relevant for other experiences. Brazil's advances and limits during the 2000s can thus provide lessons for other middle-income countries about how, to what extent, and under which circumstances it is possible to pursue pro-poor, equality-driven growth agendas.

This chapter casts a first look at the process of growth and redistribution that took place in Brazil between 2003 and 2013, identifying the main traces of the country's pattern of accumulation under the PT governments. This analysis establishes the deeper conditions of material gains for workers, as it identifies the engines of growth and the changes in the productive and employment structure of the economy. Therefore, a central concern throughout this chapter is identifying to what extent the pattern of accumulation had progressive distributional implications and how these in turn fed back into it (laying the basis for the more detailed analysis of distribution in the following chapter). The second objective is to identify the constraints of the pattern of accumulation, which pinpoint not only it its sustainability over the longer term, but also what sort of policies were needed to guarantee its continuity.

This chapter is organised as follows. Section 3.2 identifies the basic macroeconomic attributes of the growth pattern. It examines the main components of aggregate demand and shows how, after a strong contribution of exports in the first years, household consumption was the leading factor. The key policies that led to this shift of demand patterns are identified, with a particular emphasis on two income-supporting policies and their knock-on effects: MW hikes and greater social security transfers. The analysis of the leading sources of effective demand establishes that the growth cycle was driven

by domestic factors, and leads into an analysis of the sectoral transformations that accompanied growth.

Section 3.3 then analyses how growth was based on a structural change towards low-productivity, labour-intensive sectors, especially services, and allows for two conclusions. First, that there was a cumulative-causation process at play, wherein rising income at the bottom of the distribution increased the demand for wage-goods and services, which, as they were provided domestically, increased the employment of low-skilled workers to produce them. This in turn heated up the labour market, raising wages and hence increasing the demand for wage-goods once more. Second, the shift of employment to low-productivity services, intensive in low-skilled labour, meant a regressive structural change of the economy. The accumulation pattern hence comprised progressive distributive dynamics, based on a more equal distribution of wages, and regressive structural and technological dynamics, based on the shift to low-productivity services.

Sections 3.4 and 3.5 then analyse the implications of this regressive change in terms of the evolution of the main constraints of the economy, respectively the country's deteriorating insertion into the world economy and heightening inflationary pressures. Section 3.4 shows how there was a re-primarisation of exports, with the rise in the share of resource-based and primary products in lieu more technology-intensive products. Moreover, the volume of exports stagnated after 2006. Imports in turn continued to be rigid, highly concentrated in intermediate and capital goods with few domestic substitutes. Maintaining growth and balance-of-payments solvency hence came to rely on high international commodity prices or constant inflows of capital. Section 3.5 shows how inflation, particularly towards the end of the period, was dominated by rising prices of services. Given services are more prone to passing over (wage) costs to prices, and less prone to productivity gains, this meant that wage gains in services – the engine of both growth and redistribution – inherently spiked cost-push inflation.

Section 3.6 concludes, drawing out the policy dilemma these two constraints jointly implied. To maintain growth, redistribution, price stability and current-account sustainability, wage growth could not be curtailed, as it was the driving element of the pattern of accumulation – but neither could the exchange rate be further appreciated, as it would worsen the foreign deficit.[34] Only policies capable of increasing productivity, upgrading the productive structure of the economy or creating new sources of growth would be sufficient.

[34] The nominal exchange rate appreciated from an average of 3.08 BRL/USD in 2003 to 1.67 in 2011, which led to a decrease of 48% in the real effective exchange rate (nominal exchange rate and real effective exchange rate index from Ipeadata).

3.2. Domestic-, consumption-led growth

Brazil experienced a considerable growth surge from 2003 to 2013,[35] which can be divided into two phases (see Table 3.1 and Table A2.1). The initial uptick was caused by higher commodity export prices, raising the growth rate from 1.1%, in 2003, to 5.8% in 2004. From 2006 until 2011, there was an internally driven growth process based on income redistribution, public investment and induced private investment. This led to an average growth rate of 4.4% between 2006 and 2011, after which growth steadily declined until output contracted by 3.8% and 3.6% in 2015 and 2016 (National Accounts data from IBGE).

Table 3.1 Average contribution of different sources of demand and of imports to the growth rate of GDP in Brazil for selected sub-periods, 2003-2013. Absolute and relative contributions

Period	Household consumption (% of total)	Government consumption (% of total)	Investment (% of total)	Exports (% of total)	Imports (% of total)	**Total GDP growth rate (% of total)**
2003-2005	1.6 (46.9%)	0.5 (14.1%)	0.3 (8.1%)	1.8 (53.1%)	-0.8 (-22.4%)	**3.4 (100%)**
2006-2013	3.0 (77.4%)	0.5 (13.6%)	1.4 (36.1%)	0.3 (8%)	-1.4 (-36%)	**3.9 (100%)**

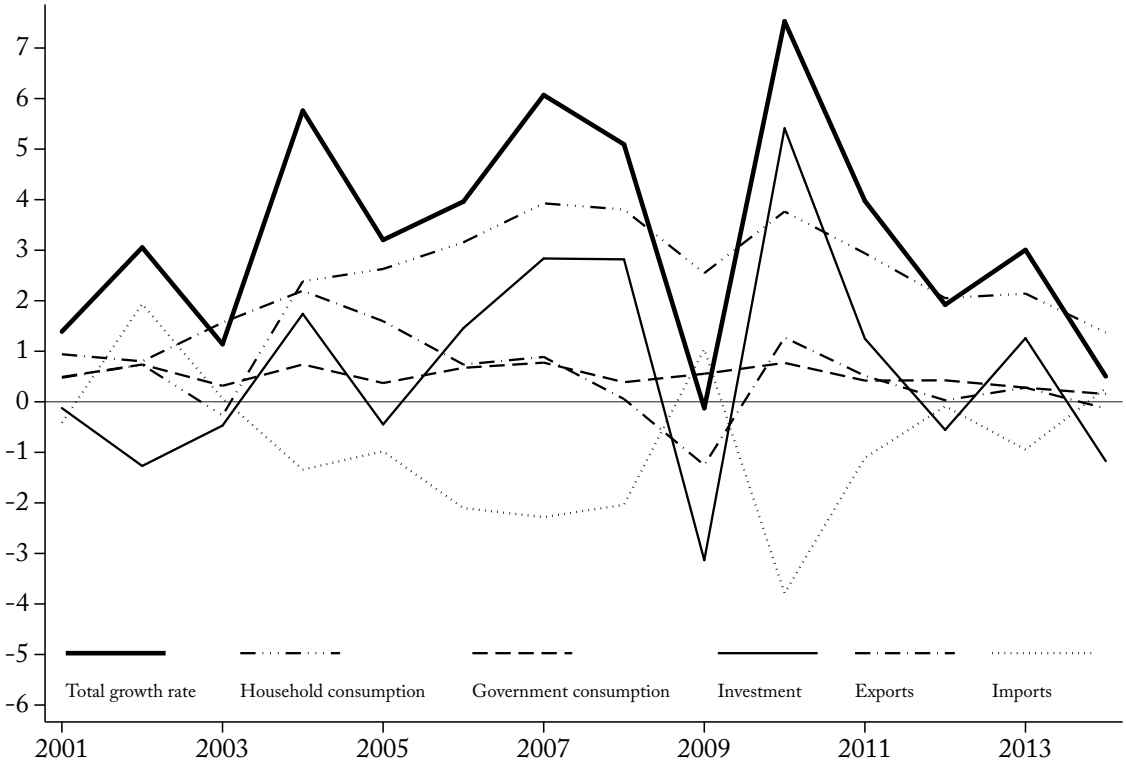
Source: Prepared by the author based on data National Accounts data (base year 2010) from IBGE (2016).

As shown in Table 3.1, between 2003 and 2005 output growth was mainly driven by the autonomous rise of exports, which accounted for 53.1% of the rise in aggregate demand.[36] This was the first component to rise substantially (see Figure 3.1, and Table A2.1), contributing with 1.6 pp of total growth in 2003, when both investment and private consumption were falling. This increase of exports can be attributed to the rise of Chinese demand for commodities, which was met with growing volumes of exports amidst also rising prices (Medeiros and Cintra 2015). Export volumes increased by 63.7% between 2001 and 2005, and prices by 24.2% (export prices and volume data, Ipeadata; Brazil's trade patterns are discussed in section 3.4).

[35] By 2012 the growth phase had already clearly slowed down, but it is only after 2013 that GDP per capita starts to decline (according to data from the National Accounts). This is why 2013 is chosen as the final year for this analysis.

[36] Souza Júnior (2016) estimated the contribution of the different sources of demand to the growth rate of GDP net of their impact on imports. This revision slightly increases the relative contribution of government consumption, given its lower impact on imports, but does not change the results substantively.

Figure 3.1 Contribution of different sources of demand and of imports to the growth rate of GDP in Brazil, 2001-2014. Absolute contributions



Notes: Imports present a positive contribution during certain years when their value decrease.
Source: Prepared by the author based on data National Accounts data (base year 2010) from IBGE (2016).

This rather fortuitous uptick in demand triggered a growth cycle whose drivers soon afterwards changed. The growth of exports quickly translated into rising tax revenues and rising domestic consumption, which by the end of the 2003-2005 period was already the fastest-growing source of demand. This was spurred by a substantial increase of government transfers to households: according to data presented by Gobetti and Orair (2015b), social security benefits – including pensions and the CCT scheme Family Allowace Programme (*Programa Bolsa Família*, PBF) – increased from 6.7% to 8.3% of GDP between 2002 and 2006.

Driven by household consumption and investment, in 2006-2013 output grew at an average rate of 3.9% per year. Exports contributed with a measly 8.0% of total growth, or an average of 0.3 points of real GDP growth per year. They were superseded by private consumption (77.4% of the total, or 3.0 points per year) and investment (36.1% of the total, 1.4 points per year), with government consumption also playing a role (13.6% of the total). Differently from the preceding period, *this was clearly a domestic-led growth cycle*, but exports and international credit also played a role as they displaced the balance-of-payments constraint: foreign currency reserves rose from approximately US$ 50 billion in 2003 to US$ 350 billion in 2011 (stock of foreign reserves data from the Brazilian Central

Bank, BCB), providing a safety cushion (see also Figure 3.3 below; caveats to the safety provided by the stock of reserves are discussed in section 3.4).

The key to understand the dynamics of this cycle, in light of the small contribution of government consumption and exports, lies in the determinants of household consumption and investment, as well as in the relation between the several components. In other words, it is a matter of identifying the autonomous drivers of household consumption and investment, and then how they led to endogenous responses that cemented a growth cycle. This will be complemented below through the sectoral distribution of growth and, in the next chapter, through a deeper analysis of income distribution.

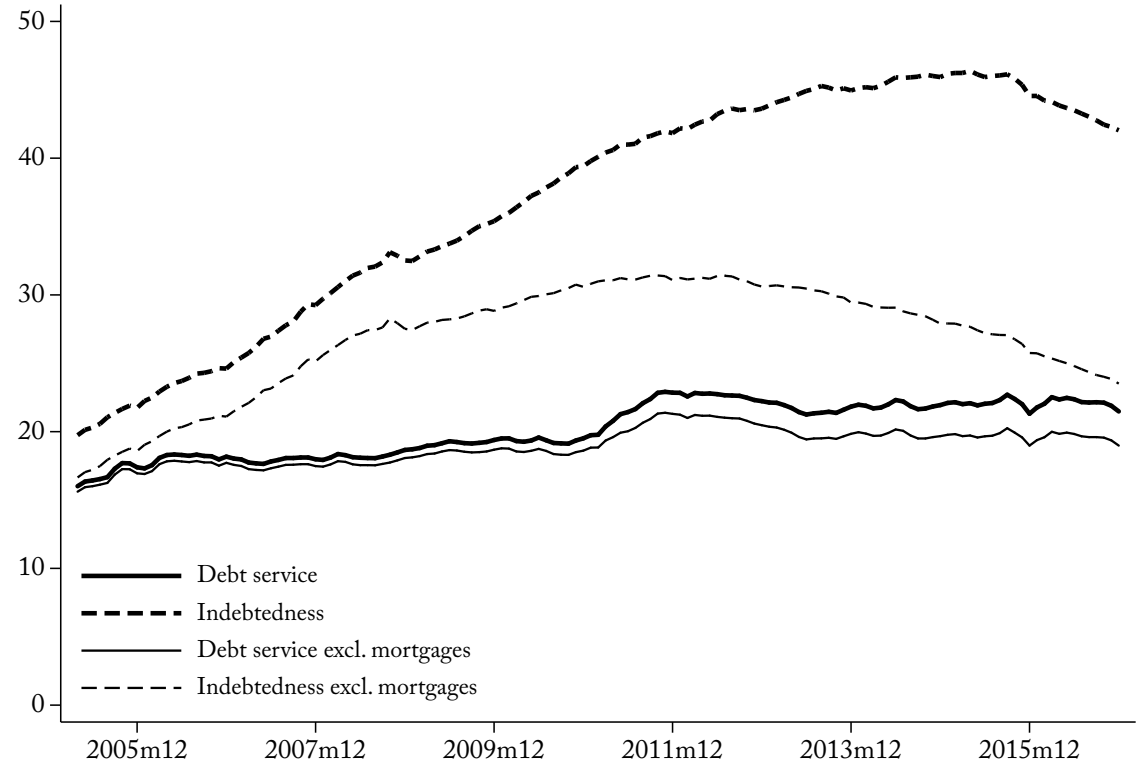
Regarding household consumption, four main factors played important roles: rising MWs and increased social security-related transfers, as autonomous drivers, and growing indebtedness and labour market participation, as partially endogenous responses. The real MW grew upwards of 70% from 2003 to 2013, and 56% between 2005 and 2013.[37] The first and most direct effect of this increase was in the labour market, as approximately 54% of all employees received between one and two minimum wages in 2005, according to data from the PNAD. Furthermore, this did not give rise to non-compliance with the MW legislation. In fact, 34% of employees received less than one MW in 2005, a value that fell to 27% in 2013 according to data from the PNAD (see chapter 4 for a more detailed analysis of this process). Given the higher propensity to consume amongst lower-income groups, it is expected that this increase was translated almost entirely into greater demand.

The impact of a higher MW extended far beyond the labour market, however, as several social security benefits and state pensions were linked to it. In particular, the floor of state pensions and of unemployment insurance, and the social security scheme for the elderly called Continued Assistance Benefit (*Benefício da Prestação Continuada*, BPC), are all defined as one MW, so they get automatically readjusted when the MW changes. In this vein, Orair and Gobetti (2010) indicate that government transfers to households, comprising state pensions, social security and unemployment benefits, CCT schemes such as PBF, and other similar programmes, rose by almost 2 pp of GDP between 2002 and 2010 (see also Gobetti and Orair 2015b). Importantly, almost 40% of this increase can be attributed to rising MWs, with the remaining portion being due to the creation of new programmes (PBF was introduced in October 2003) and demographic changes. Therefore, higher values for benefits, greater coverage, and the creation of new social security programmes jointly increased the income of the poorer sections of the population, autonomously raising demand.

[37] Real minimum wage data from Ipeadata. The values are deflated by the National Consumer Price Index (Índice National de Preços ao Consumidor, INPC), and reflect the average real minimum wage during the reference years.

As growth picked up, labour market participation rose, further increasing household disposable income. In 2003, 58% of the individuals between 15 and 65 years of age were in paid occupations, reaching 61% in 2012, whilst unemployment for this group fell from 10.0 to 6.3% (PNADs). Labour informality also decreased substantially, as the share of informal, low-skilled workers fell from 40 to 33%, whilst their formal counterpart rose from 36 to 45%.[38] In this scenario, therefore, rising MWs and greater benefits did not lead to individuals exiting the labour market, but rather heated the latter and thus reinforced the income-generating process.

Figure 3.2 Household indebtedness and debt service as a percentage of household income in Brazil, with and without mortgages, January 2005 to December 2016



Notes: indebtedness defined as stock of outstanding debt as a percentage of annual household income, and debt service defined as principal and interest payments as a percentage of household income.
Source: Prepared by the author based on data from BCB (2017).

Household indebtedness (the stock of outstanding debt as a percentage of annual household income) also rose considerably during this period, from 21.7% of household income in December 2005 to 45.0% in December 2013, or from 21.1 to 29.4% excluding mortgages (household indebtedness data from BCB). After this period, it stagnated or decreased, as seen in Figure 3.2. This was based on both a deepening of debt levels for households that were already financially included as well as, to a large extent, an extension of credit

[38] Data from the PNAD. The definition of informal, low-skilled workers is presented in chapter 2. Chapter 4 presents the evolution of the Brazilian class structure from the perspective of households, whilst these data refer to individuals.

instruments to new consumers. In this vein, Lavinas (2015) indicates that, between 2005 and 2010, the share of households with credit cards increased from 15 to 25%, for those with an average income of up to 3 MWs, and from 30 to 43%, for households with an average income between 3 and 5 MWs (see also Lavinas 2017).

Finally, private investment can be taken as an effect induced by the growth process itself. Recent studies about the determinants of investment in Brazil (Santos *et al.* 2016b, Santos *et al.* 2012) have highlighted two main points: that there is a strongly complementary relationship between public and private investment, and that the latter is very closely tied to the growth rate of output.[39] Private investment should thus not be considered, in this scenario, as an autonomous source of demand; in the words of Serrano and Summa (2015: 823), '[t]he private component of investment in machinery and equipment is basically driven by the need to adjust the stock of capital to trend growth in effective demand'. [40]

So far, the argument goes that exports, followed by government transfers to households and rising MWs, kick-started a growth cycle that soon afterwards assumed its own dynamics. Between 2006 and 2013, household consumption raised domestic demand and thus stimulated investment, generating growth, further increases of disposable income and, consequently, higher household consumption, reinitiating the cycle. To better appreciate the links between these components and proceed to an initial identification of the drivers of income redistribution during the period, the sectoral dimension of this process is now explored.

3.3. Regressive structural change and growth

Analysing how the sectoral structure of employment changed, it is argued that the autonomous drivers of demand (rising MWs and social security transfers) spurred a cumulative-causation process connecting growth, distribution and (regressive) structural change. Rugitksy (2016) proposes that there was a cumulative-causation process connecting growth and redistribution in Brazil during the 2000s, and this has since then been explored in other works (Carvalho 2018, Rugitsky 2017). This thesis engages with the hypothesis and further develops it in a series of ways. First, it shows how this cumulative-causation process was a knock-on effect of key income-supporting policies, particularly MW hikes. Second, it adds substantial empirical backing to it, not only in terms of the sectoral transformations of the economy, which is done in this chapter, but

[39] The international price of commodities was also a positive determinant, mainly as it relaxed financing conditions.

[40] This is not meant as a general theoretical point about the determination of investment, but is rather restricted to the dynamics of the particular growth and redistribution episode being studied in Brazil.

also in terms of the precise drivers of income redistribution, in chapter 4. Third, it shows its class character and develops the inherent constraints this growth and redistribution process implied, which leads to a discussion of its limits. Finally, this thesis also explores how similar phenomena were underway in Argentina, in chapters 5 and 6, and compares the processes for both countries in the conclusions.

Table 3.2 Net employment generation, average wages, labour productivity and wage-share of value-added for sectors that generated more than 500,000 net jobs between 2003 and 2013, Brazil

Sector	Thousands of net jobs created, 2003-2013 (% of total)	Average wages, relative to whole economy,[a] 2013	Labour productivity,[b] 2013 (relative to whole economy)	Difference in labour productivity,[b] 2003-2013	Wage-share of value-added,[c] 2013
Food and beverages	812 (4.3)	1.17	20.8 (0.98)	5.0	0.602
Machinery and equipment (including repairs)	521 (2.8)	1.63	27.5 (1.30)	-10.7	0.637
Construction	3,156 (16.8)	0.65	15.8 (0.74)	3.8	0.443
Sales	3,310 (17.6)	0.69	15.8 (0.74)	6.6	0.469
Transport and storage	1,009 (5.4)	1.06	21 (0.99)	7.2	0.541
Lodging services	764 (4.1)	0.40	10.2 (0.48)	4.4	0.424
Services provided to businesses	2,658 (14.2)	1.15	24.9 (1.17)	0.2	0.495
For-profit education	1,084 (5.8)	0.95	11.7 (0.55)	-6.3	0.877
For-profit health	955 (5.1)	0.85	19.1 (0.90)	-0.5	0.480
Services provided to families	1,140 (6.1)	0.58	9.3 (0.44)	1.2	0.661
Total private	**15,409 (82.1)**	**0.78**	**16.3 (0.77)**	**3.6**	**0.511**
Public education	1,229 (6.6)	2.01	22.6 (1.06)	4.9	0.956
Public health	700 (3.7)	2.24	25.2 (1.19)	1.3	0.955
Public administration	1,286 (6.9)	3.17	39.0 (1.84)	2.2	0.873
Grand total	**18,767 (100)**	**1**	**21.2 (1)**	**3.7**	**0.506**

Notes: [a]: total wage bill of the sector (including benefits) divided by number of jobs, relative to the same ratio for the whole economy. [b]: labour productivity in thousands of 2003 Brazilian reais per worker per year, deflated by the implicit GDP deflator when the evolution is shown. Relative productivity is the labour productivity of the sector divided by that of the whole economy. [c]: The wage-share of value-added counts mixed income as profits.

Source: Prepared by the author based on data National Accounts data (base year 2010) from IBGE (2016).

The analysis of structural change in Brazil is based on data from the National Accounts (IBGE). Between 2003 and 2013, there were a total of 18,8767,000 net jobs created. Of the 51 activities discriminated in the National Accounts, 13 increased their employment by more than 500,000. Ten of these were in the private sector and accounted for 82.1% of all net jobs created. The analysis will thus consider these ten activities, listed in Table 3.2, given that they capture the main thrust of the growth process.

The leading sectors had four general characteristics: *they had low average wages, they provided wage-goods and services, their labour productivity was below average, and they were labour-intensive*. First, in 2013, only one sector (machinery and equipment) had an average wage substantially above the overall mean wage (1.63 times the average), and its contribution to job creation was modest, at 2.8% of the total. The wages in five other sectors were close to the average, between 0.85 and 1.17, and in four other sectors they were substantially below, standing between 0.40 and 0.69 times average wages. These four sectors – construction, sales, lodging services and services provided to families – were responsible for 44.6% of all net jobs created between 2003 and 2013, and their overall wages were 0.62 times the economy-wide average. Together, the ten sectors listed in Table 3.2 created 15,409,000 net jobs and had a relative average wage of 0.78. This confirms the first link, namely that *employment grew mostly in low-paid sectors, that employed a large number of low-skilled workers*.[41] The distributive implications of this process are analysed in the next chapter, but, to advance some conclusions, the higher relative demand for low-skilled (as opposed to high-skilled) labour was one of the key drivers of redistribution (for how a similar process was underway throughout Latin America, see Galiani *et al.* 2017). That employment was created in relatively low-paid sectors also explains the high clustering of wages between one and two MWs that obtained during the period, and indicates a shortcoming of the development strategy.[42]

Second, almost all of these sectors were suppliers of wage-goods and services, with the exception of machinery and equipment and services provided to businesses. Food

[41] It should also be noticed that the relative mean wages of for-profit education, a sector with a high share of professional workers, decreased considerably, from 1.76 to 0.95. This suggests, as is confirmed in the next chapter, that there was a relative devaluation of high-skilled labour.

[42] It might sound counterintuitive that creating employment with below-average wages reduced inequality, but this is not the case. From a static point-of-view (i.e. disregarding possible wage gains due to higher demand for these occupations), the key reason is, essentially, that wages somewhat below or above the average might still be close to the middle ranks of the distribution. Taking only wage inequality into account (and not household per capita income inequality, as is done in the next chapter), based on data from the PNAD for 2013, it can be seen that sectors with a relative wage between approximately 0.7 and 1.5 tended to be progressive, in the sense that increasing their employment-share would reduce overall wage inequality. This was not the case in all of these sectors, given that the impact of a changing sectoral distribution of employment on wage inequality depends on the whole distribution of wages, and not only on their mean values by sector (see the sensitivity indicators in chapter 2).

and beverages, sales, lodging, services provided to families, and for-profit health and education stood out, with links to households rising along the bottom of the distribution. Construction can be taken along the same lines, given the importance of the housing programme My House, my Life (*Minha casa, minha vida*, MCMV).[43] The MCMV programme, launched in 2009, involved the state, private construction companies and the state-owned bank Caixa Econômica Federal, with different arrangements depending on the income levels of the consumers (for an assessment of the PT's urban policies, including MCMV, see Klintowitz 2016, Maricato 2013, 2017, Rolnik *et al.* 2015). For the lowest-income group, the state paid the construction companies up to 90% of the value of the housing unit, whereas for the others there were subsidised credit mechanisms in place. In all cases, however, the remaining value of the properties was to be paid through a mortgage provided by Caixa Econômica Federal.[44] Official data indicate that about 2,000,000 housing units were delivered until 2014, at a cost of R$ 88 billion in subsidies and generating debt obligations of R$ 131 billion (Ministério das Cidades 2014). That the leading sectors were suppliers of wage-goods and services, orientated to the domestic market, thus confirms the second link, that *the driver of demand for domestic output was the growth of income at the bottom of the distribution*.

Third, these were low-productivity sectors, mostly services. Machinery and equipment was the only sector whose labour productivity was substantially above the economy-wide average in 2013, at 1.30 times the latter. Nevertheless, the labour productivity of machinery and equipment decreased from R$ 38,200 to R$ 27,500 per worker per year between 2003 and 2013 (in constant 2003 reais). In turn, construction, sales, lodging services, for-profit education, and services provided to families were all of them at least a quarter below average productivity in 2013. Taken together, the labour productivity of the ten sectors in Table 3.2 was 23% below the average of the whole economy in 2013, and over the studied decade their productivity increased at about the same rate of that of the whole economy (R$ 3,600 per worker per year, in constant 2003 reais). Therefore, *the structural change initiated by the cumulative-causation process was regressive, in that it spurred low-productivity services sectors*.

A point that connects these three dimensions regards the functional distribution of income, or the wage-share of value-added, in these sectors. The wage-share of the whole economy increased from 0.449 of total value-added to 0.506 during this period, which indicates that the pattern of growth both stimulated the wage mass and relied on it as the

[43] For details of the rules of the programme, see Krause *et al*. (2013).

[44] In this regard, greater access to credit was a major enabling condition. This can be seen in Figure 3.2 above, which shows how household indebtedness excluding mortgages decreased since 2011, whereas that including mortgages rose by a further 6 pp until mid-2015.

main dynamic driver of demand. This rise in the wage-share was, furthermore, in large part determined by changes in the productive structure of the economy. Martins (2017) uses data from the National Accounts and, by means of a shift-share method applied to the 2000-2013 period, estimates the contribution of distributive conflict (changes to the wage-share in each sector) and of structural change (changes to the sectoral composition of the economy, in so far as sectors have got different wage-shares) to explain this increase. The author finds that that structural change was twice as important as distributive conflict. Therefore, *labour-intensive sectors were the drivers of growth, further highlighting the technologically regressive character of the latter*.[45]

In sum, the sectoral dimension showed how the growth and redistribution process became, for a while, self-propelling. Aggregate data had shown how household consumption, stimulated by rising MWs and government transfers, were the main dynamic elements of the cycle. The sectoral pattern of growth then indicated how this demand was concentrated in wage-goods, particularly services, aimed at workers climbing the bottom of the income ladder. Food and beverages, lodging and services provided to families are clear examples of this, whilst construction was supported by the MCMV housing programme for low-income households. These goods and services were supplied domestically, accounting for the bulk of the jobs created during the period, in sectors whose wages and labour productivity were below the economy-wide average, but with an above-average wage-share of value-added. This heated up the labour market for low-skilled occupations, increasing wages in the bottom of the distribution and labour formalisation, as show in more detail in the next chapter, which added fresh demand for these wage-goods and services. As growth picked up and income was redistributed, this also led, however, to a more precarious international insertion of the economy (via the regressive structural change) and to creeping cost-push inflation in services. The next two sections explore these changing constraints in turn.

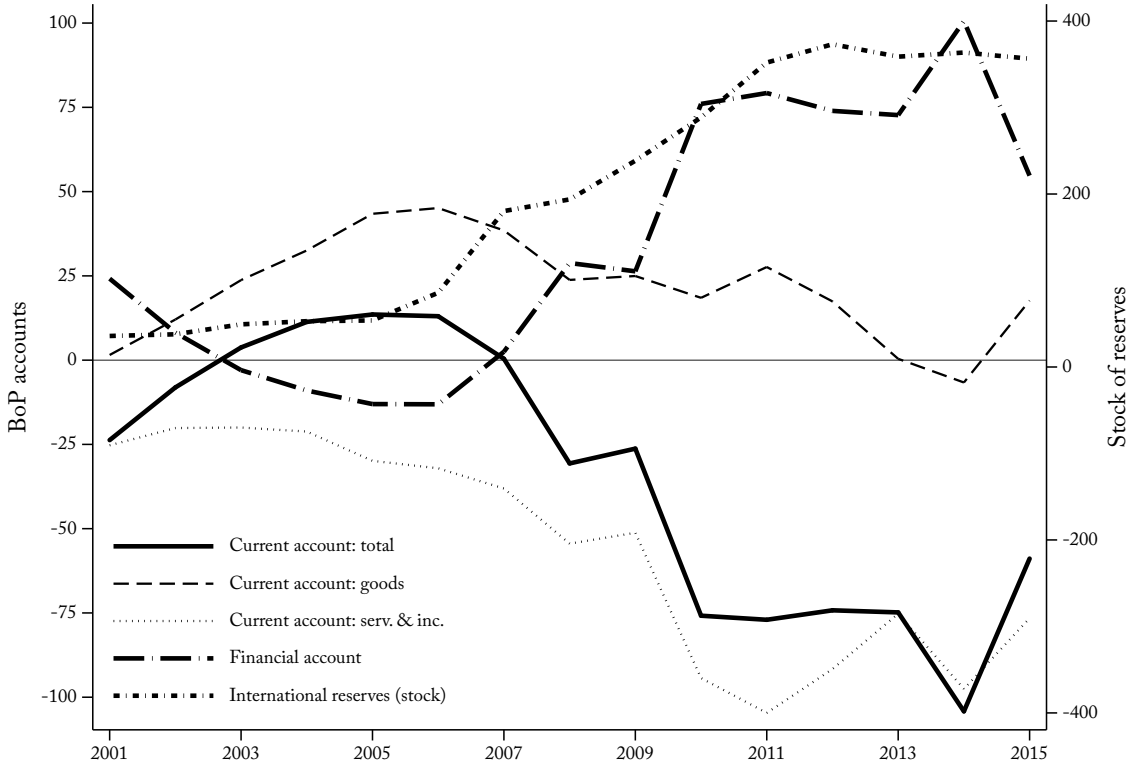
3.4. Regressive structural change, the balance-of-payments constraint, and Brazil's deteriorating insertion into the world economy

As mentioned briefly in section 3.2, although exports were not the main driver of growth from 2003 until 2013, they played an important role displacing the balance-of-payments constraint. This role was shared with substantial capital inflows, which continued throughout the whole period almost continuously. Together, exports and capital inflows

[45] That changes to the sectoral composition of the economy were the main driver of the higher wage-share, especially until 2010 (Martins 2017), is also relevant to understand how, in spite of a higher wage-share, the profit rate oscillated without a clear trajectory until 2010 (Marquetti *et al.* 2017). This also helps explains how, as shown in the next chapter, the income of large employers was basically stable over the whole period.

led to an accumulation of foreign reserves that cushioned Brazil from the short-term impacts of global cycles, or at least their most abrupt manifestations, providing some measure of short-term resilience (although there were important caveats to this, explored below). Nevertheless, the reasons for this accumulation of foreign reserves were not a structural upgrading of the country's insertion in the world economy, but rather to a large extent an increase in the price of its exports.

Figure 3.3 Selected balance-of-payments accounts and stock of foreign reserves (US$ billion), Brazil, 2001-2015



Note: Balance-of-payments accounts recorded following BPM6 methodology.
Source: Prepared by the author based on data from Ipeadata.

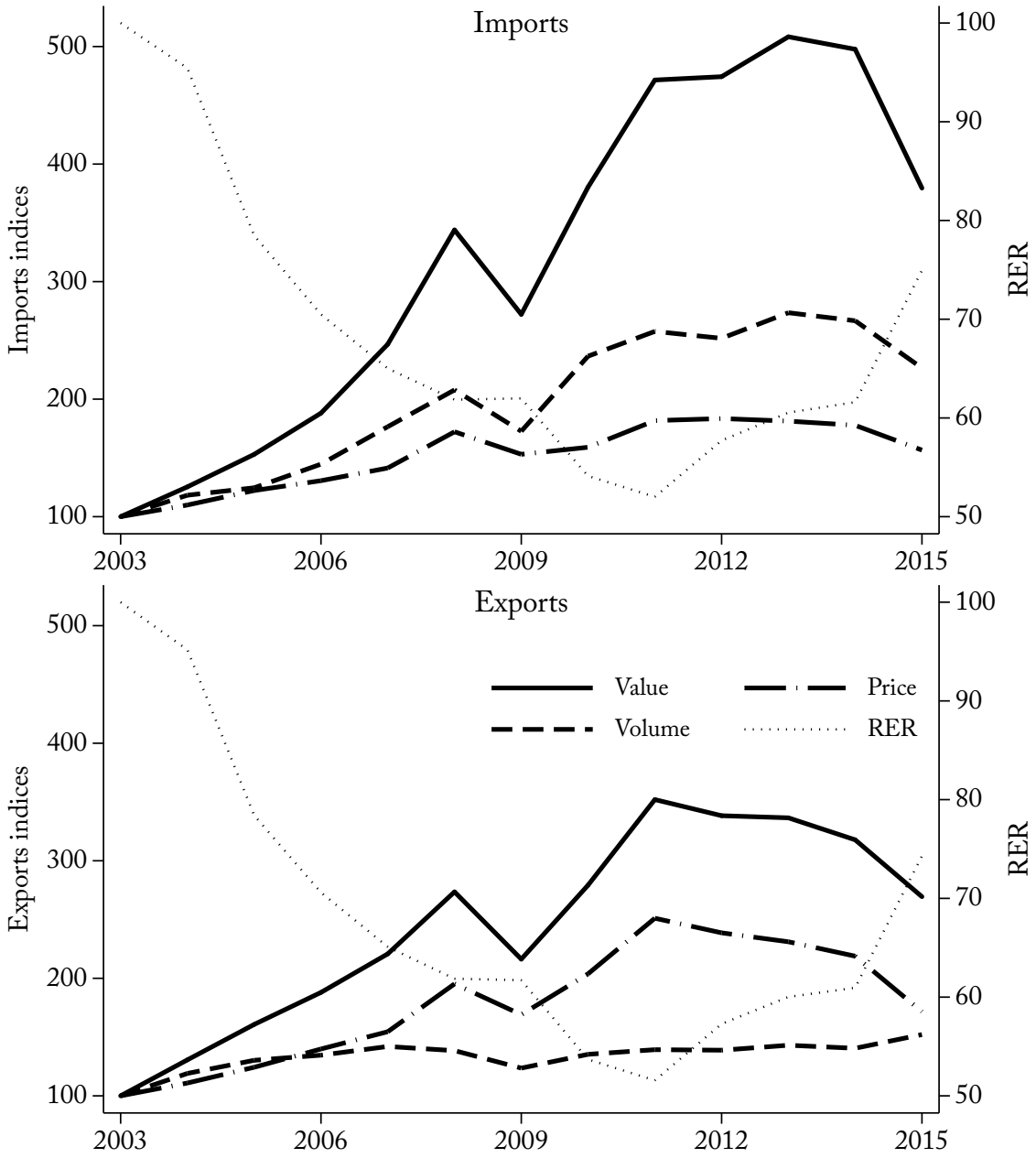
The results of these limited industrial and trade policies can be seen in the changing composition of Brazilian exports and imports, which compounded the problems previously identified in the aggregate volumes and values of foreign trade. As seen in Figure 3.3, the balance-of-trade in goods grew fast until 2006, when it reached a record surplus of US$ 45 billion, and declined steadily thereafter. The current account as a whole shifted into a deficit already in 2008, driven by trade in services and profit remittances, recording deficits of around US$ 75 billion for most years. This did not lead to a crisis, however. With a total net foreign capital inflow of about US$ 360 billion between 2007 and 2013, the stock of foreign reserves, coincidentally, also rose to US$ 360 billion at the end of 2013, a value around which it oscillated until 2015.

What these data show is that the pattern of growth did not engender balance-of-payments crises in the short term, but it was still structurally reliant on foreign savings. It should be noted that such a reliance is by no means new: since the 1950s, Brazil has had only eleven years with current-account surpluses, and the five years between 2003 and 2007 were the longest continuous stretch of this period (balance-of-payments data from Ipeadata). Nevertheless, the clearly diminishing balance-of-trade surpluses, which only recovered after GDP growth turned negative in 2014, were a strong indication that the growth pattern did not improve the structural conditions of the Brazilian economy.

Another process that has been noted in the literature is how new external vulnerabilities emerged during this period, in spite of the accumulation of foreign reserves (Kaltenbrunner 2017, Paula *et al.* 2017, Rossi 2015). Kaltenbrunner and Painceira (2015, 2018) have shown how the greater share of domestic-currency assets owned by foreign investors,[46] and hence funded in foreign currencies, created two new fragilities. First, this increased the volatility of the Brazilian exchange rate, as it became highly dependent on the portfolio decisions of foreign investors. The reason for this is that any decision to withdraw (foreign-funded, but domestic-currency) assets from the country would have an immediate impact on the exchange rate, in light of the large stock these assets represented. The short-term nature of these asset-holdings further increased the exposure of the exchange rate to the movements of foreign investors. Second, these portfolio decisions of international investors were independent from the dynamics of the domestic economy, subjecting the latter to volatile pressure arising from international financing conditions. As a result, the Brazilian economy continued to be exposed to destabilising effects from international capital flows and had little policy space to manage the exchange rate (Kaltenbrunner and Painceira 2017, Prates and Paula 2017). These new financial sources of foreign vulnerability do not mean that the Brazilian economy would have been better off by not holding reserves at all, which of course constitutes a situation of extreme fragility, but rather that a large stock of reserves, in itself, was not a sufficient condition for foreign resilience.

[46] Between 2003 and 2011, the participation of foreign investors in the Brazilian stock market, in the US$ futures market, and in the domestic interest rate futures market rose, respectively, from about 25 to 40%, from 10 to 30%, and from 10 to 20% (Kaltenbrunner and Painceira 2015: 1289).

Figure 3.4 Real exchange rate, and value, price and volume indices for exports and imports, Brazil, 2003-2015 (2003 = 100)



Note: Prices are Fisher indices for the basket of imports/exports, denominated in US dollars. IPEA calculates the real exchange rate as the trade-weighted average of Brazil's bilateral real exchange rate with its 24 main partners, where the bilateral real exchange rate is relative the evolution of price indices in both countries. The real exchange rate is defined in terms of Brazilian reais per foreign currency (a decrease means an appreciation of the domestic currency).

Source: Prepared by the author based on data from Ipeadata.

These shifting external vulnerabilities were also accompanied by problematic trends in the country's balance-of-trade. Figure 3.4 shows how imports grew, from 2006 onwards, much faster than exports (see also Table A2.2). The total value of the former increased fivefold between 2003 and 2013, whereas exports, in their 2011 peak, had risen to about 3.5 times their value eight years prior. It is certain that the appreciation of the Brazilian

real contributed to this: in nominal terms, the exchange rate went from a maximum of 3.67 BRL/USD, in December 2002, to a minimum of 1.56, in July 2011 (data from Ipeadata), whilst in real terms it was nearly halved between 2003 and 2013 (see Figure 3.4). This impacted the balance-of-trade directly, through the prices of imported and exported goods, and also by making Brazilian exporters uncompetitive in global markets (Nassif *et al.* 2017, Nassif *et al.* 2015). Nevertheless, as explored below, the deteriorating balance-of-trade results from 2006 onwards were due to more than purely price dynamics – as an initial evidence, however, there was is negative correlation between the real exchange rate and the volume of exports, which grew during most of the time the exchange rate was appreciating and vice-versa (on this point, see Serrano and Summa 2015).

Importantly, the price and volume indices for imports and exports displayed divergent trajectories during the period. If the price of imports did increase by 81% between 2003 and 2013, their volume rose twice as much during the same period, escalating by 174% before falling with the effects of the crisis that ensued. Exports, on the other hand, were essentially reliant on rising international prices to increase their overall value. Their quantity increased by 35% until 2006, and then exports were virtually stagnant, with increases in some years offset by decreases in the others.[47] This means that, after 2006, overall export values became closely linked to movements of their prices, verifiable in the tight association between the two series. In other words, *to obtain foreign currency through trade the Brazilian economy was essentially reliant on beneficial price trends, which, absent as they were after 2011, led to a decreasing value of exports*.

In order to understand what drove this deterioration of Brazil's international trade patterns during the PT governments, it is necessary to explore (the limitations of) the country's trade and industrial policies in this period. Since 2003, departing from the thin policy framework of the previous two decades, there were a series of policies that simultaneously sought to influence Brazil's productive structure, the economy's research and development dynamics, the internationalisation of its companies, and its international trade pattern, which can jointly be analysed as industrial and trade policies (for comprehensive reviews, see ABDI 2015, Arbix *et al.* 2017, Nassif and Feijó 2013). As explored below, these initiatives often had multiple – and sometimes conflicting – goals, including elements of counter-cyclical macroeconomic policy, and with few exceptions they were very broad in terms of their sectoral coverage (see also Döring *et al.* 2017).

[47] The rise in 2015, which continued through the next year, was most likely due to insufficient domestic demand, which made producers look for foreign markets. This behaviour of the Brazilian economy, which exports surpluses when domestic demand is insufficient and produces trade deficits when growth accelerates and output is redirected to the internal market, is a long-standing feature Carneiro (2002) analyses for previous decades.

The first initiative, in 2003, was called Industrial, Technological, and International-Trade Policy (*Política Industrial, Tecnológica e de Comércio Exterior*, PITCE). Belying its all-encompassing name, this was arguably the most innovation-focused policy of the PT governments (for details, see Salerno 2012). Its goal was to stimulate product-differentiation and -diversification in Brazilian manufacturing through research, development and innovation, which would allow manufacturing firms to compete in higher-value-added segments of international markets. This would in turn help conquering new markets and evading those marked by greater price competition and high labour-intensiveness, thus increasing overall Brazilian exports. Differently from future plans, it had a restricted sectoral remit: semiconductors, software, capital goods, pharmaceuticals, biotechnology and nanotechnology were the only sectors contemplated by the policy.

In terms of its policy instruments, PITCE had three pillars (Salerno and Daher 2006). First, tax exemptions and fiscal incentives for expenses with innovation, including hiring and keeping researchers in firms' payroll, through the 2004 Law of Innovation (*Lei da Inovação*) and the 2005 Law of Good (*Lei do Bem*). Second, subsidised credit for research and development, through the National Bank for Economic and Social Development (*Banco Nacional de Desenvolvimento Econômico e Social*, BNDES) and other federal agencies. Third, it sought to implement legislative changes to improve product standards, facilitate joint projects with universities and other institutions, and introduce other broad-ranging, horizontal regulatory initiatives.

PITCE did manage to change the debate on industrial policy in Brazil and led to some of the aforementioned laws that incentivised innovation, but it failed to develop and fully establish itself. It set the tone for most of the other industrial and trade policies during the PT governments, as the first two broad instruments mentioned above would form the core of innovation-orientated stimuli through growing resources directed to tax exemptions and subsidised credit, whilst the third line, that of broad regulatory changes in a coordinated, articulated vision never took hold. The key reason for PITCE's limited impact was a lack of resources and an unclear institutional setting, which relegated it to a peripheral position in government structures, hence preventing it from articulating different initiatives and leading to a poorly defined, ineffective implementation (Arbix *et al.* 2017, Mirra and Salerno 2015).

After PITCE, the other industrial and trade policies would have a much less clear focus on industrial upgrading and innovation as intermediate goals, but rather attempted to sustain investment rates, create jobs (or prevent job losses), support the internationalisation of Brazilian companies and raise overall economic growth. The Productive Development Policy (*Política de Desenvolvimento Produtivo*, PDP), launched in 2008 and soon aborted

with the onset of the world financial crisis, had as its motto 'innovate and invest to support growth' (Ferraz *et al.* 2015). Focusing on subsidies and tax exemptions to stimulate investment, but more geared towards investment in general than innovation per se, this policy initiated a cycle of initiatives without sectoral selectivity – no less than 24 sectors were contemplated as strategic. This made it, in the words of Mirra and Salerno (2015: 124), 'look more like a BNDES programme than an integrated policy plan'. None of its goals, related to investment rates and export-orientation, were met (Arbix *et al.* 2017).

PDP was superseded, in 2009, by the Programme for Sustaining Investment (*Programa de Sustentação do Investimento*, PSI), and in 2011 gave way to the Greater Brazil Programme (*Programa Brasil Maior*, PBM), both presented as industrial policies by the government (Nassif and Feijó 2013). These programmes involved substantial resources, but, in spite of the industrial upgrading rhetoric, they were not geared to stimulate innovation: PSI, for example, dedicated around 4% of its budget to support innovation-related investment (Arbix *et al.* 2017: 21). The broad sectoral range of PSI was inherited from PDP, alongside an even stronger preference for tax exemptions and subsidised credit as the main policy instruments. Combined to the Growth Acceleration Programme (*Programa de Aceleração do Crescimento*, PAC), PSI and PBM became much more an instrument of counter-cyclical macroeconomic policy than an industrial or trade policy (Arbix 2017). A clear indication of this is that PBM gave greater subsidies to less research-intensive firms and sectors through its tax exemption policies, which privileged labour-intensive companies: 'a positive criterion when the concern is employment, but a regressive one when the topic is innovation policy' (Arbix *et al.* 2017: 23).

A key element in the Brazilian economic-policy framework of the period was the role of BNDES, which straddled several areas including industrial and trade policy and was instrumental to the initiatives discussed above (Ferraz *et al.* 2015, Nassif and Feijó 2013). From 2009 onwards, BNDES was capitalized, becoming the largest development bank in the world, which provided loans and other financial support especially to large domestic firms, the so-called 'national champions' (Boito Jr 2012). Those included Itaú and Bradesco (banking), Embraer (aviation), Odebrecht (construction), Vale (mining), Inbev (beverages), Gerdau (steel), and Friboi and Brazil Foods (processed foods), which, with few exceptions, were not technology- or research-intensive sectors. The objective of these actions was to internationalise big domestic companies, so that they would increase their exports and foreign activities, particularly to other Latin American or to African countries (Boito Jr and Berringer 2014).

These policies were inefficacious in upgrading Brazil's productive structure and exports due to three main issues: lack of sectoral selectivity; no consistent focus on innovation,

associated to a blurring between macroeconomic and innovation policies; and a strong reliance on tax exemptions and subsidies as the main policy instruments. The recent debate on productive upgrading has highlighted that industrial policies, to be effective, must be structured around a vision that will inevitably be selective: it is inherently about privileging *certain* sectors (or firms, or products) over others, directing resources to *change* an existing structure towards the guiding vision (Andreoni and Chang 2016, 2018) or mission (Mazzucato 2018). This is not to say that horizontal initiatives, such as infrastructure investments or developing industrial standards, are not required. The point is that such initiatives also involve some level of selectivity (e.g. which firms will benefit the most from motorway or rail improvements?), and, especially, that they must be integrated in a plan that directs change, as opposed to distributing piecemeal subsidies across the board.

In fact, the dimension in which Brazil's industrial and trade policies were selective was in that they aimed to reinforce the country's existing comparative advantages, as opposed to seeking dynamic productivity gains by branching into more sophisticated goods, which shows a lack of ambition in terms of the direction of structural change (for a debate, see Lin and Chang 2009). This is almost an inevitable corollary of supporting existing 'national champions', i.e. firms which were already competitive in their fields. Given the broad range of (mostly unsophisticated) sectors with 'national champions' to be supported, this led to the somewhat paradoxical result of the policy framework being dispersed throughout the economy whilst focusing on large, domestic companies in established sectors. Arbix (2017: 33) aptly summarised the problems with the lack of sectoral selectivity: 'since its birth, the Brazilian [innovation] system has not been able to maintain constant flows of resources and has had a great difficulty in defining its focus and priorities, which is the root of the deleterious effects that spring from the pulverising of investment and the low technological ambitions of its agents. This fragmentation ... favours the development of knowledge without focus, priorities of concrete results.'

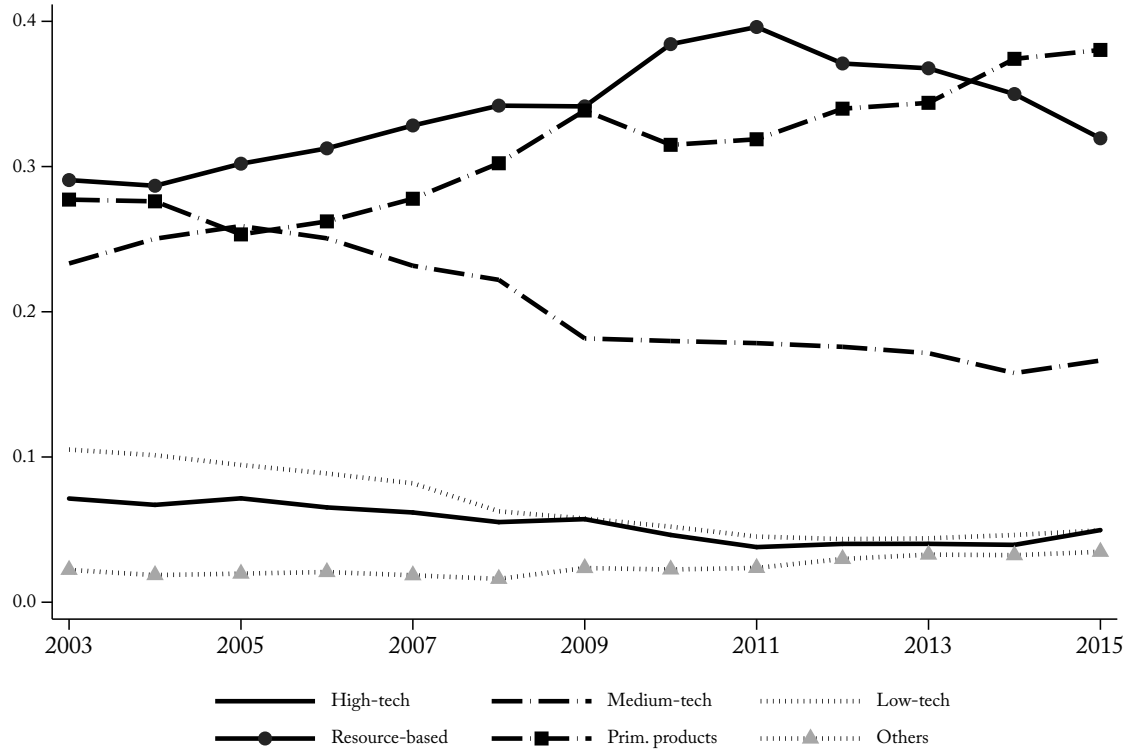
Not only were the industrial and trade policies unfocused in sectoral terms, but, as discussed above, their objectives were stretched beyond what they could deliver. In particular, as the goals went from subsidising innovation to subsidising investment in general, particularly labour-intensive investment in a counter-cyclical macroeconomic policy framework, the specific objectives of industrial and export upgrading would have to be sacrificed. This is not to say that macroeconomic goals, such as supporting growth, or social objectives, such as maintaining high employment levels, cannot be complementary to industrial upgrading. In fact, there does need to be an *articulation* between these goals, as argued by Nassif and Feijó (2013), but this is different from subsuming industrial policy into an

investment-subsidy policy, particularly when labour-intensive, low-productivity sectors – such as construction – stand to benefit.

Finally, the focus on subsidies and tax exemptions was an inefficient way of driving investment, both more generally and in relation to research and development expenditures. In macroeconomic terms, beginning in 2011 the government reduced public investment and increased transfers and subsidies: the general government's investment declined from 2.7% of GDP, in 2010, to 1.7%, in 2015, whilst subsidies to private companies rose from 0.6 to 1.2% of GDP over the same period (Orair *et al.* 2016: 17). Since the multiplier effect of public investment is much greater than the expansionary impact of the subsidies, the net effect of the government's policies was sharply contractionary and did not stimulate aggregate investment (Carvalho 2018, Serrano and Summa 2015). A similar situation arose with regards to innovation-orientated subsidies: 19% of private companies' investment in research and development received public subsidies in the beginning of the 2000s, rising to 46% in 2014 (compared to an OECD-average of about 60%), whilst overall investment in research and development was essentially stagnant over the period (Arbix 2017: 33). This suggests the need for using other instruments to stimulate innovative activities, with a clearer presence of the state in driving them and more attention to productive linkages, as opposed to transferring money to firms with dubious results.[48]

[48] What these subsidy-orientated policies did manage to do was to please industrial capitalists in the beginning of the 2010s. Dilma Rousseff's economic policies in her first government were so closely aligned with the demands of domestic capital that some commentators have called it the Agenda of the Industrial Federation of the State of São Paulo [*Federação das Indústrias do Estado de São Paulo*, FIESP], after the economic programme of the country's most powerful business organisation (Carvalho 2018). Eike Batista, who became one of Brazil's wealthiest entrepreneurs before his spectacular downfall in 2017, gloated that the public-private partnerships present in this economic programme offered business a 'happiness kit' (Alves 2012).

Figure 3.5 Share of exported goods according to technological sophistication, Brazil, 2003-2015 (current prices)

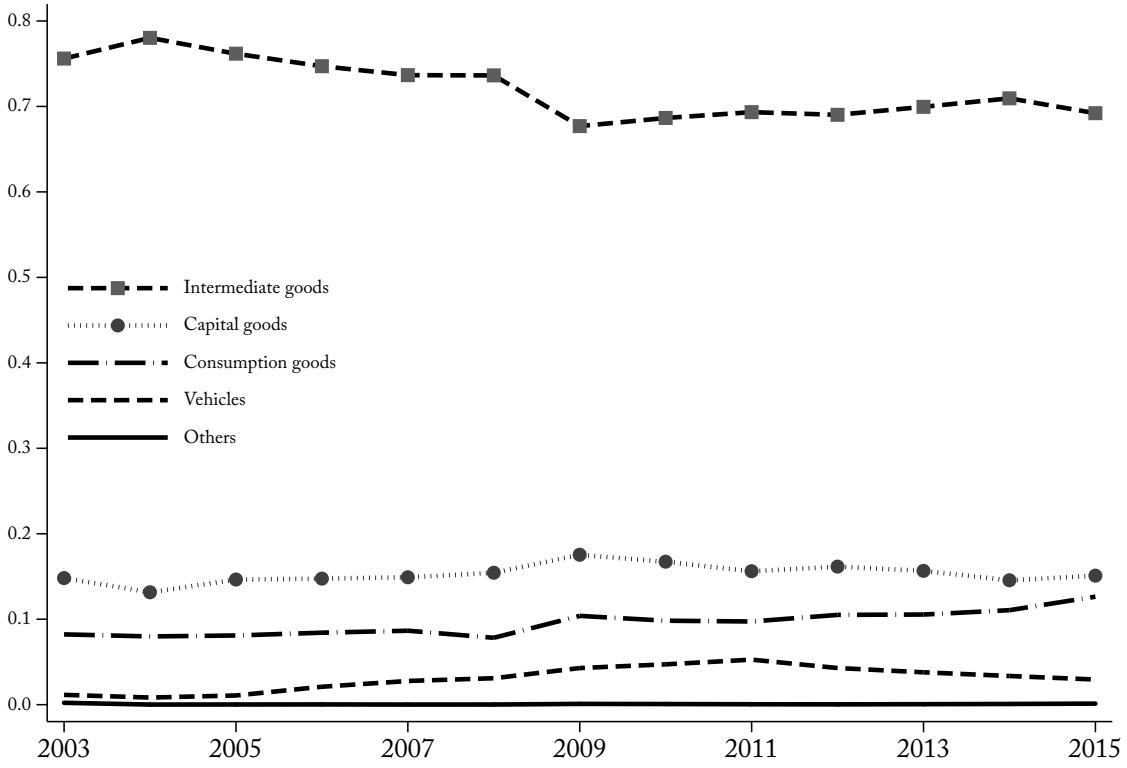


Note: Technological classification based on Lall (2000).
Source: Prepared by the author based on data from WITS (World Bank 2017).

The results of these limited industrial and trade policies can be seen in the changing composition of Brazilian exports and imports, which compounded the problems previously identified in the aggregate volumes and values of foreign trade. Figure 3.5 shows the distribution of exported goods (in current prices) according to their technological sophistication, following the classification Lall (2000) developed. The results are unambiguous: there was a steady decrease of high-, medium- and even low-technology manufactured goods, the largest loss being in the medium-technology group, which fell from 23.3% of total exports in 2003 to 17.1% in 2013. Resource-based exports and primary goods in turn increased their share by seven and eight pp, respectively. Together, they went from 56.8% of total exports, in 2003, to 71.1% in 2013. It should also be noted that although resource-based exports decreased their share after 2011, in large measure due to price changes, primary products continued to increase, whilst the technology-intensive categories oscillated. Nassif *et al*. (2015) show, furthermore, that this process began in the 1990s, with the onset of the neoliberal reforms that included trade liberalisation and the abandonment of active industrial policy, when the Brazilian balance-of-trade in technology-intensive goods began to deteriorate. In sum, during the PT governments, Brazil's trade pattern with the world became even more concentrated in goods of low technological intensity, which, as discussed in chapter 2, has negative

consequences over the longer term by making exports become more volatile, less elastic to income and with fewer positive spillovers (see also Andreoni and Chang 2016, Gala *et al.* 2018, Thirlwall 2011).

Figure 3.6 Share of imported goods according to broad economic categories, Brazil, 2003-2015 (current prices)



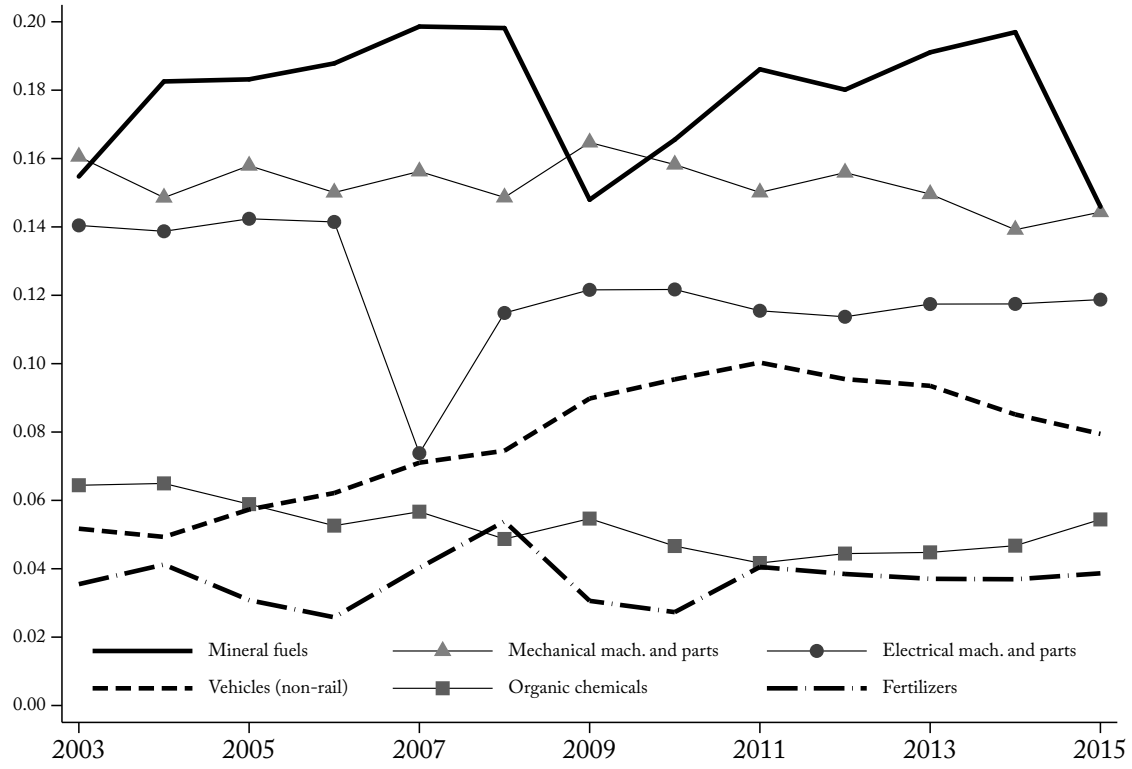
Note: Goods classified by the Broad Economic Categories classification (BEC, rev. 4).
Source: Prepared by the author based on data from COMTRADE (United Nations 2017).

Figure 3.6 in turn offers a first view into the composition of Brazilian imports, dividing them according to broad economic categories (the precise categories of goods are examined below). The most noticeable element was the clear dominance of intermediate goods, which throughout the whole period accounted for between 68 and 76% of all imports. Whilst this share did fluctuate somewhat, with a tendency to decrease, stability was the rule. At the same time, there was a slight increase of consumption goods, which went from 8.2% in 2003 to 10.5% in 2013. This share of final-consumption goods indicates that Brazilian imports were not geared to satisfying final consumption, and so the overall increase of imports over the period cannot be explained by hypotheses based around conspicuous consumption. Capital goods fluctuated according to the rhythms of domestic growth, but were always and consistently above consumption goods, even well into post-2013 downturn.

As Brazilian imports were concentrated in intermediate and capital goods during the 2000s, the imports bill was rigid, in the sense of being inelastic to prices and the exchange

rate (see also Medeiros 2015, Santos *et al.* 2015). The evolution of imports during the PT governments thus was not the effect of growing purchasing power directly flowing into the demand for foreign goods. It was, rather, an indirect effect of rising household income, *mediated by a deficient productive structure* that, to provide the goods demanded by households at the bottom of the distribution, had to resort to imports. This is, in fact, a scenario that offered fewer degrees of freedom than if imports were concentrated on final consumption goods, for any sustained increase of domestic output would have an unavoidable impact on imports. Which meant that fast growth, in the conditions Brazil faced towards the end of the 2000s, would need to bring about either an increase of exports or a substitution of imports, under the penalty of being unsustainable.

Figure 3.7 Share of the six largest groups of imported goods in total imports, Brazil, 2003-2015 (current prices)



Notes: Goods classified by chapters of the Harmonized System 2002 classification (HS2002, 2 digits). These six groups correspond, in the order presented in the legend, to the following HS chapters: 85, 84, 29, 31, 27, 87.

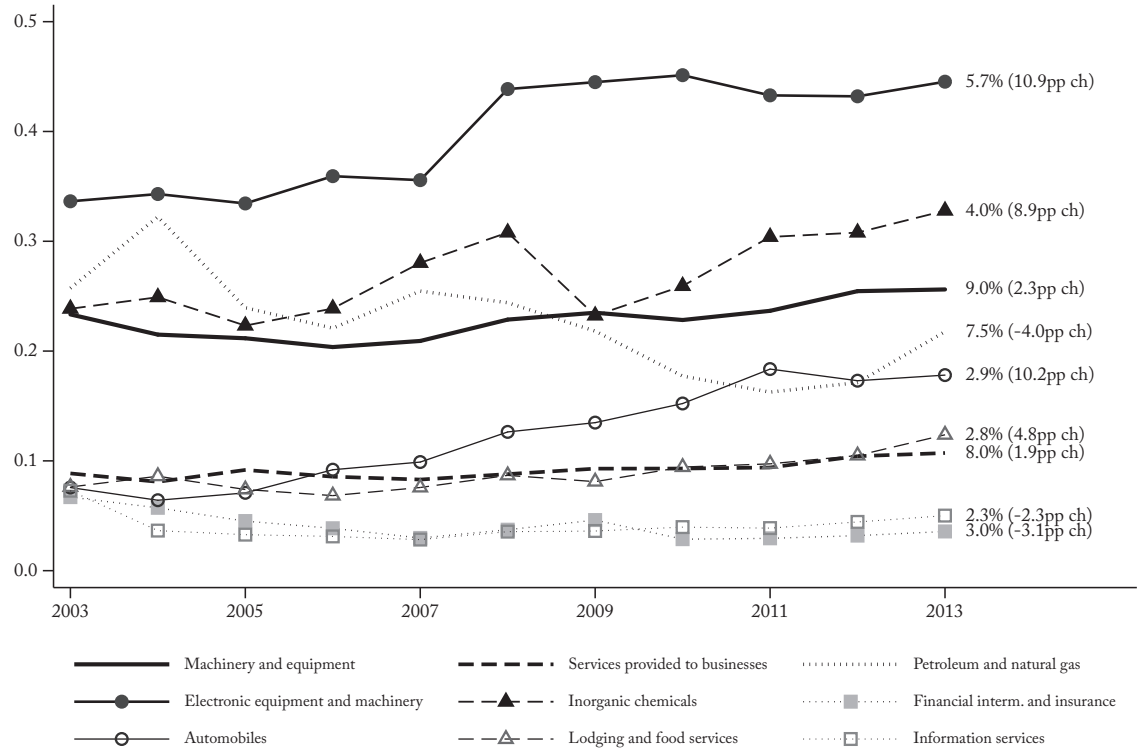
Source: Prepared by the author based on data from WITS (World Bank 2017).

To help explain the rigidity of the imports bill, Figure 3.7 displays the evolution of the share of the six largest groups of imports, classified according to chapters of the HS2012 system. These groups were, in order of importance, mineral fuels (mostly petroleum), mechanical machinery and their parts, electrical machinery and their parts, vehicles and their parts (excluding rail-based ones), organic chemicals and fertilisers. These six groups, out of a total of 97, accounted for between 60 and 64% of total imports throughout the

period, and hence continuously carried much weight. It is not an exaggeration to say they comprised, without much change, the hard core of Brazilian imports. Apart from the consistent rise in imports of vehicles, there were no clear trends in the others, which fluctuated according to the domestic cycle (most clearly in the case of fuels).

As analysed in further detail by Santos *et al*. (2015) and by Medeiros (2015), the main reason for the continued weight of these six categories of goods lies in the historic incapacity of the Brazilian productive structure to provide them. Computer chips, modern machinery that function as capital goods and certain kinds of fuels and fertilisers are deficiencies of the country's economy, which, although not a product of the recent period, were made more acute during the 2000s. Furthermore, Figure 3.7 displays the shares of these goods, whilst the total value of imports was rising substantially, as seen in Figure 3.4. Therefore, this historic deficiency was compounded during the past decades, particularly when growth accelerated, whilst there was no evolution in the volume or quality of exports to offset it.

Figure 3.8 Import penetration of the nine goods and services responsible for the largest share of total Brazilian imports, Brazil, 2003-2015 (current prices)



Notes: Goods classified according to the 107 categories of Brazilian national accounts. Import penetration defined as imports at basic prices divided total domestic supply, also at basic prices. The values at the right-hand-side show the products' share of total imports in 2013 and, in parenthesis, the absolute change in their import penetration between 2003 and 2013.

Source: Prepared by the author based on data National Accounts data (base year 2010) from IBGE (2016).

Finally, it is also necessary to look at the evolution of the import penetration of key goods and services, presented in Figure 3.8 based on national accounts data (IBGE). These products were, in order of importance in total imports, machinery and equipment, services provided to businesses, petroleum and natural gas, electronic equipment and machinery, inorganic chemicals, financial intermediation and insurance, automobiles, lodging and food services, and information services. As expected, they are similar to the main ones according to the previously used classifications, but the inclusion of imported services adds further nuances to the picture. Together they accounted for between 44 and 46% of total imports over the analysed period, and hence constituted the bulk of Brazilian imports.

Import penetration, defined as imports divided by total domestic supply, increased from 6.6 to 7.5% for the whole economy between 2003 and 2013. Even if considerable in relative terms – approximately a 14% increase – this rise of import penetration was of less than 1 pp. Furthermore, the share of imports in GDP was stable at 15% between 2003 and 2013. In terms of the 107 individual goods and services discriminated in the national accounts, the import penetration of 42 products did not go up, whereas of 10 goods it increased by it 10 pp or more.[49] The macreconomically most relevant rises of import penetration were in three products, which jointly accounted for about 13% of imports in 2013. These products were electronic machinery and telecommunications equipment, whose import penetration increased from 33.6% in 2003 to 44.5% in 2013, inorganic chemicals (from 23.9 to 32.8%), and automobiles (from 7.6 to 17.8%). Therefore, the broad picture was to a large extent one of stability, with a gradual rise of import penetration.

Overall, the analysis of imports showed a nuanced picture. Domestic demand was not redirected to foreign producers to a large extent, in spite of some punctual problematic developments in this direction. The central point to take, however, was the concentration of imports in particular intermediate goods, the supply of which is a historical shortcoming of the Brazilian productive structure. Although the incapacity of the Brazilian economy providing these technologically sophisticated goods is much older than the analysed period (Medeiros 2015, Santos *et al.* 2015), it was slightly aggravated over the decade. Another central implication of this is that movements of the real exchange rate would not substantially alter the demand for imports, but only their total value in domestic currency, as the goods imported were necessary to continue with domestic production (i.e. they were price-inelastic). Therefore, this points to the likely insufficiency of keeping a devalued real

[49] These were all capital goods, intermediate goods and fuels, with the exception of clothing – which, however, responds for only about 1.2% of total imports.

exchange rate as the central mechanism to improve the economy's international insertion, a strategy that has been advocated by, amongst others, Bresser-Pereira (2012b, 2012c).[50]

If the evolution of imports was not in itself too worrisome, bringing it together with the analysis of exports leads to a more negative picture. Brazil continued to be a relatively closed economy, with the value of imports corresponding to about 15% of GDP, so it is not necessarily the case that higher import penetration, as such, should be taken as problematic. Be that as it may, such an increase without a corresponding strategy to raise exports or substitute selected imports could not but jeopardise the balance-of-trade in the medium term. This is particularly true when considering that Brazilian imports continued to be closely tied to the domestic growth cycle, whereas exports, as shown above, became more volatile as they deteriorated towards a low-technology profile. Consequently, the stagnation of the productive structure, from the point of view of imports, becomes a veritable regressive structural change when combined to the re-primarisation of exports.

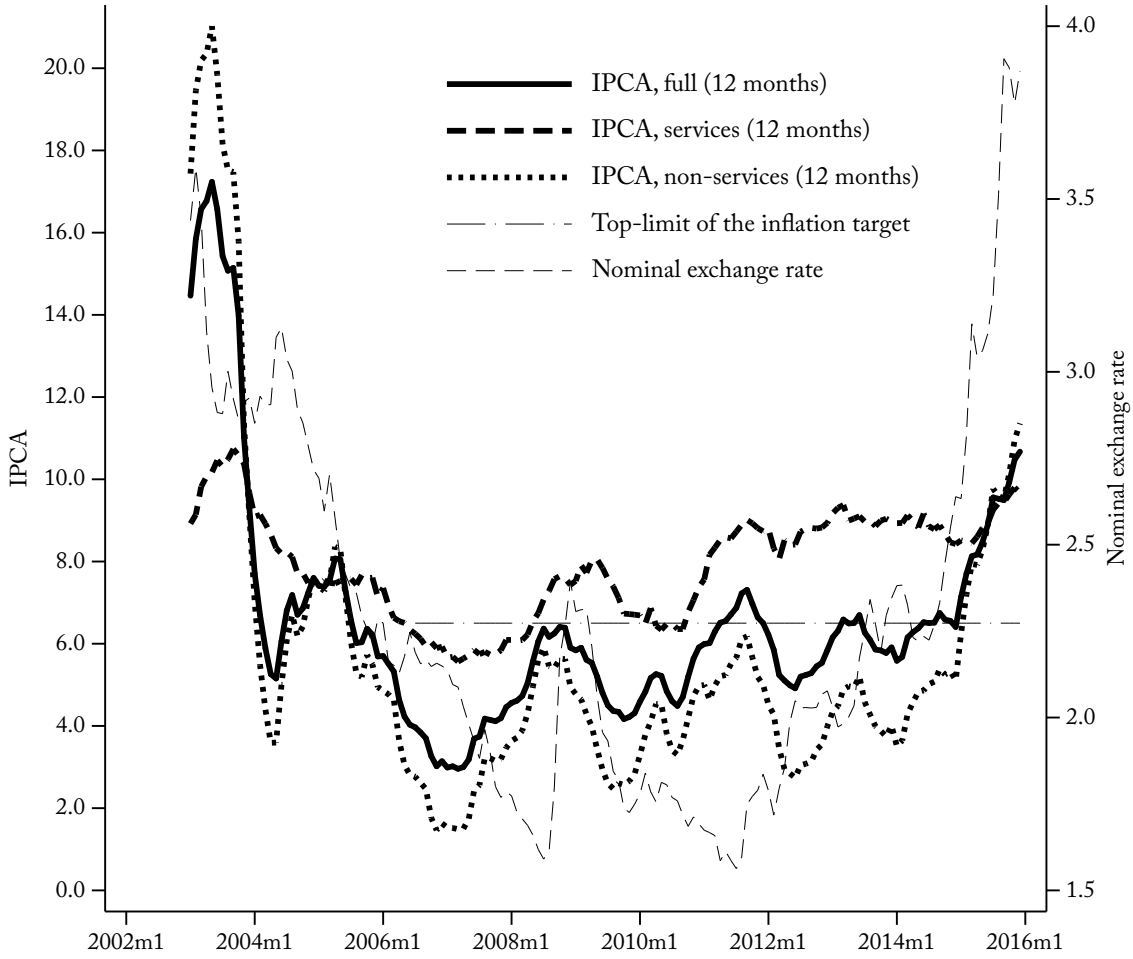
In sum, this section has shown that the growth pattern prevalent between 2003 and 2013 gradually deteriorated the country's insertion in the world market. This did not happen through major upheavals, as in the debt crisis of the 1980s or with the privatisation *cum* liberalisation of the 1990s (Belluzzo and Almeida 2002, Carneiro 2002), but rather through stagnation and falling behind international competitors. The profile of exports worsened, in terms of having lower income-elasticity and being more volatile, and also because the production of the exported goods presented lower productive linkages and knowledge spillovers and generated fewer high-skilled jobs. Moreover, the aggregate index for the volume of exports was mostly stable after 2006, meaning that the short-lived increase in value until 2011 was mostly a function of the commodity boom. Imports, in turn, continued to be concentrated around intermediate goods that the Brazilian economy has not produced to a sufficient extent for decades, and if import penetration did not change dramatically it nevertheless increased slightly. The transformations of the productive structure thus implied a regression of the exports bill and an incapacity to supply intermediate goods in sustainable volumes. As *the demand for imports continued to be a direct function of domestic output itself, and became even more so, the demand for Brazilian exports got increasingly attached to the vagaries of international prices of, and the demand for, commodities*.

[50] A development strategy structured around maintaining a stable and devalued exchange rate was also advocated for Argentina and Latin America by other authors (e.g. Damill and Frenkel 2014, 2017, Damill *et al.* 2015, Frenkel and Rapetti 2008). This is discussed in chapter 5.

3.5. Creeping cost-push inflation in services

As the pattern of accumulation was driven by household consumption, with rising wages in low-productivity services as its major propeller, cost-push inflation in services arose as the other major constraint. This was, therefore, an endogenous tendency of the growth pattern. More than this, it became a conundrum, given that, as explained below, the policy framework in place relied on appreciating the domestic currency to cheapen imports and combat inflation. In this arrangement, combatting inflation would necessarily be at the cost of worsening trade deficits and vice-versa. This dilemma is explored in detail below.

Figure 3.9 Inflation rates in Brazil (IPCA, 12-months) highlighting the contribution of services, and the nominal exchange rate (BRL /USD), Jan/2003-Dec/2015



Note: the items considered as services are: food consumed outside the household; residential repairs; repairs of furniture and household goods; health services; personal services; leisure; and education.
Source: Prepared by the author based on data from IBGE.

In 2003 the inflation rate in Brazil, as measured by the Wide Consumer Price Index (Índice de Preços ao Consumidor Amplo, IPCA), spiked above 17% per year (see Figure 3.9). This came as a result of the uncertainty and speculation surrounding the election of former president Lula, of the PT, which made the nominal exchange rate jump from

1.95 BRL/USD in January 2001 to 3.81 in October 2002 (Morais and Saad-Filho 2005). With high interest rates, foreign capital inflows and large primary surpluses, inflation steadily decreased until reaching a low point of 3.0% (year-over-year) in the beginning of 2007. From then on inflation crept slowly up, shooting above the 6.5% ceiling of the target during some months until surpassing 10% in 2016. It would only decrease substantially in 2016, amidst a deepening economic crisis.

The causes of the movements of inflation, and more so the efficacy of the measures put in to combat it, have been the object of much debate (e.g. Barbosa Filho 2015, Barboza 2015, Braga 2015, Carvalho 2014a, Carvalho and Giovannetti 2017, Santos *et al.* 2016a). What matters for the purposes at hand are two issues. First, the extent to which inflationary pressures were a result of the accumulation pattern itself, as opposed to being fortuitous external events. Second, what sort of measures would have secured price stability – or, more specifically, whether the prevailing policy mix was capable of containing inflation without sacrificing growth and income redistribution. As seen below, the answers are that there were strong intrinsic inflationary pressures, and that combatting them in a sustainable way required measures beyond the macroeconomic framework in place.

Precise decompositions of the causes of inflation are notoriously hard, in light of the interconnections between its determinants and the sectors of the economy, but the following stylised facts seem to hold for the Brazilian economy. The exchange rate pass-through is perhaps the central determinant of inflation, in the sense of it being the most important transmission mechanism – although its impact in a given conjuncture will depend, of course, on the magnitude of changes in the nominal exchange rate and international price dynamics. It is also relevant to bear in mind that its initial impacts are then amplified by being used to readjust administered prices, i.e. prices that are controlled by the government, which essentially comprise public services such as urban transportation (Braga 2015, Carvalho *et al.* 2016).

In this sense, although there has been no formal exchange rate anchor in Brazil since the currency began to float in 1999, the nominal exchange rate continues to be the central element to hold back inflation. This is an element of the macroeconomic framework that has been in place since 1999, the so-called 'macroeconomic tripod', comprising a floating exchange rate, primary government surpluses and inflation targeting (on which, see Barbosa and Souza 2010, Bresser-Pereira 2013b, Corrêa and Santos 2013, Morais and Saad-Filho 2011). In this framework, inflation is primarily fought by keeping high interest rates used to appreciate the domestic currency and hence cheapen imports, as well as curtailing demand (Carvalho *et al.* 2016). A central result of this is that the Central Bank has an 'appreciation bias' in its management of the (dirty) floating exchange rate,

effectively removing the autonomy of the exchange-rate policy, for whenever there are inflationary pressures the nominal exchange rate has to be appreciated to hold back prices (Kaltenbrunner and Painceira 2017).

The key role of the exchange rate to fight inflation can be seen through the tight fit between the nominal exchange rate and the IPCA index, in Figure 3.9, particularly until 2010. This association is weaker between 2010 and 2014 for two reasons. The first regards the control of administered goods and services, which were purposefully held back during the period: between 2012 and 2014, for example, their average annual inflation was of 3.5%, against 6.9% for non-administered items (on the fiscal costs associated to this policy, see Almeida *et al.* 2015, Carvalho 2018). The second reason, investigated below, regards the weight of services (BCB 2016).

Inflation in services was the most acute element of the index since 2006, when wage gains picked up pace. This dominance of services continued to increase and, between 2010 and 2015, it was on average two points above the full index. As seen in Figure 3.9, at certain points (such as the beginning of 2014) the price of services grew almost 4.5 pp above the average, or 6.5 pp above non-services elements. Studies have shown how the major determinant of inflation in these items were wage costs, given that, the sectors not being subjected to international competition, they could more easily pass cost hikes over to prices. Santos *et al*. (2016a), in a study of services-inflation in Brazil between 1999 and 2014, identified that cost pressures in fast-growing sectors – the same low-productivity ones identified in section 3.3 – were the most relevant factor. The explanation offered was that wage gains in sectors with slow productivity dynamics and not subjected to international competition were passed over to prices, along the lines of the Baumol disease (Baumol and Bowen 1966). Carvalho and Giovannetti (2017) arrived at similar conclusions, showing that wage hikes, and not demand pressures *per se*, explain the inflation in services during the growth phase of the 2000s and 2010s.

The important point to take from this is that a central aspect of the growth and redistribution process in place, namely wage hikes in low-productivity sectors, imposed a central constraint on the economy in the form of a tendency towards escalating inflation. The exchange rate pass-through, particularly when key international commodity and fuel prices were on the rise, was the other key factor in inflation (although it was mostly used as a deterrent until 2012, through appreciations of the nominal exchange rate). These were both cost-push determinants, against which curtailing demand – through restrictive fiscal and monetary policies, for example – was a particularly ineffective response (for further reasons that decrease the efficacy of monetary policy in combating inflation in Brazil, see Barbosa Filho 2015, Barboza 2015, Carvalho 2014a, Carvalho *et al.* 2016).

To try and hold back inflation, for a while the government implemented stricter price controls, both directly through administered prices, as shown above, and through diverse subsidies and tax exemptions. Specifically as regards fuels, the state-owned company Petrobras was the one responsible for financing the difference between international and domestic prices (Almeida *et al.* 2015). If this did have an effect for a while (as seen through the lower increases of administered prices, shown above), it was a costly policy which could not be extended indefinitely – Almeida *et al.* (2015) estimate fuel subsidies cost Petrobrás R$ 98 billion between 2011 and 2014. This use of the state-owned company had, furthermore, clearly regressive implications, given that higher-income households are the largest consumers of fuel (for a discussion of the potential progressive uses of resource rents, particularly oil, see Segal 2011, 2012).

As continuing to appreciate the currency was impractical and would furthermore worsen the already-deteriorated international insertion of the economy, the analysis points to the need for broader policies. Raising global productivity, say through infrastructure improvements, or measures to increase the efficacy of monetary policy in combatting inflation were prime candidates (Carvalho 2014a, Carvalho *et al.* 2016). This would also require capital controls, to shield the economy from the impacts of sudden changes in flows of international capital and regain monetary policy autonomy (Kaltenbrunner and Painceira 2017, Prates and Paula 2017).

Overall, the joint constraints of the pattern of accumulation point to a conundrum: *it became impossible to balance growth, redistribution, monetary stability and balance-of-payments solvency under an ongoing regressive structural change and with an overvalued currency*. The productive structure of the Brazilian economy deteriorated and lost international competitiveness during the 2000s, creating structural supply problems and making export income essentially dependent on commodity prices. This highlights how the 'commodities supercycle', with due mediations, was an enabling condition of the growth and redistribution process in Brazil. Reverting this regressive structural change would only be possible via a combination of wide-ranging industrial policies *and* a competitive real exchange rate. Maintaining a competitive real exchange rate would, however, create inflationary pressures, aggravating the other constraint the economy faced. The other option available in the policy mix to combat inflation, which was curtailing wage gains in services sectors, was tantamount to dismantling the whole growth and redistribution nexus. In this scenario, either new sources of growth and income distribution would have to be found, or the macroeconomic management of the economy would have to be overhauled so as to revert the regressive structural change, improve the country's insertion in the world economy and fight inflation more effectively.

3.6. Conclusion

This chapter has examined the accumulation pattern of Brazil, with a view to identifying its central drivers and constraints. It was first shown how, in the beginning of the PT administrations, exports brought output up after years of low growth, but were soon superseded by domestic demand as the driver of growth. Until the country entered into recession, in 2014, the growth and redistribution cycle that took place was dominated by domestic determinants. On this regard, it was shown how income-boosting policies, in the form of MW hikes and greater social security benefits, raised income and demand at the bottom of the distribution. This then initiated a series of market mechanisms that interacted to drive growth between 2003 and 2013.

Based on this, it was then argued that the growth and redistribution episode had a key sectoral dimension. Specifically, rising income at the bottom of the pyramid raised the demand for wage-goods and services, and hence for low-skilled workers to produce them. This in turn led to labour formalisation and higher wages for these workers, feeding back on the cycle (this process is examined in more detail in the next chapter). In this vein, MW hikes and greater social security were the autonomous drivers of the process, which had a knock-on response in terms of the employment structure of the economy and the distribution of income.

This structural change, if on the one hand increased the wages of low-skilled workers and hence redistributed income, on the other hand deteriorated the productive structure of the economy. It can thus be considered a regressive structural change. Specifically, employment increased in low-productivity, low-wage personal services with a higher-than-average wage-share. This drove up the demand for low-skilled workers, raising their wages, formalising labour and generating an employment boom upwards of 18,000,000 jobs between 2003 and 2013. Concurrently, it also decreased the overall competitiveness of the economy and created few high-quality jobs.

This deterioration of the productive structure of the economy negatively impacted the country's international insertion. The balance-of-trade peaked in 2006 and then steadily decreased until 2014, only recovering as the country entered into a crisis and GDP plunged. The current account turned negative in 2008 and since then registered deficits upwards of US$ 70 billion for most years. To maintain balance-of-payments solvency, steady inflows of capital became a structural necessity, even if in the short term a sizeable stock of reserves prevented a full-blown balance-of-payments crisis. New foreign vulnerabilities also emerged, in light of the growing ownership of short-term domestic-currency assets by foreign investors.

Behind these developments stood different trajectories for exports and imports. It was shown how after 2006 the value of exports became dependent on rising international prices, as the exported volumes were thereafter essentially stable. As the so-called commodities supercycle ended in the beginning of the 2010s, the value of exports decreased until 2015. Moreover, the composition of exports in terms of their technological sophistication deteriorated sharply. Resource-based goods and primary products together increased their share of total value by 14 pp, in lieu of medium- and high-technology manufactures. Even if there were no pressing short-term crises in the balance-of-payments, the decrease of the technological intensity of exports hampered the medium-term sustainability of growth, given the lower linkages, spillovers and income-elasticity of these goods, as well as the greater volatility of their demand and prices.

Imports, on the other hand, continued to steadily rise in volume until 2013. The chapter explored the composition of imports, finding a high and stable concentration in intermediate and capital goods, of respectively around 70 and 15% of total imports. Six categories of goods – mostly fuels, machines and chemicals – accounted for about 60% of total imports throughout the whole period. The nature of these goods indicates that the rise of imports was not a direct effect of rising household income, with demand for final consumption goods leaking abroad, but rather the effects of the former mediated by long-standing deficiencies of the Brazilian productive structure. This large, and to an extent growing concentration of imports in intermediate goods, meant that imports were a largely elastic function of growth, contrary to Brazilian exports.

The chapter then explored the second constraint that arose from the accumulation pattern, namely high inflation. It was shown how services sectors kept substantially above the overall inflation index since 2006, and particularly after 2010. Importantly, this was a direct implication of the growth and redistribution pattern, as the latter was driven by rising wages in low-productivity services sectors that were then passed over to prices. Reducing inflation could not rely, therefore, on curtailing such wages, under the penalty of sacrificing the central drivers of the whole process. The other possible mechanisms were either inefficacious, such as contractionary policies to reduce demand, given that inflation was due to rising costs and not excessive demand; had unsustainable fiscal costs, such as the fuel subsidies and the control of administered prices; or, in the case of appreciating the nominal exchange rate, would worsen the balance-of-trade, which was already a growing problem.

There are two main implications going forward. First, this chapter has shown how the pattern of accumulation spurred employment and wage rises in the lower rungs of the labour market, which then fed back into greater demand for wage-goods and reinitiated

the cycle. The distributional implications of this are taken up in the next chapter, which explores further determinants of the process and its class dimension. Second, this chapter has indicated how towards the end of the analysed period there was conundrum, the resolution of which would require finding new engines for growth and distribution or an overhaul of existing policies. The next chapter takes up this question by better detailing changes in the distribution of income and their shortcomings.

4

Income inequality in Brazil during the Pink Tide: a labour-led redistribution without confrontations

4.1. Introduction

Chapter 3 cast a first look at the pattern of accumulation in Brazil under the PT governments (2003-2016), focusing on the growth and redistribution episode that lasted from 2003 until 2013. It sequentially investigated the drivers of growth, the changing sectoral composition of the economy, the country's international trade patterns and the dynamics of inflation. The chapter showed how an initial boost to the demand for exports interacted with a series of policies, particularly rising MWs and greater social security transfers, to change the composition and volume of effective demand, initiating a cumulative-causation process that drove growth and structural change. In particular, this increased the size of low-productivity, relatively low-pay sectors producing wage-goods and (especially) services, leading to wage gains for low-skilled workers to produce them and hence fresh additions to effective demand. At the same time, this process was coterminous with a regressive change in the country's productive structure, which defined

two constraints. First, the balance-of-trade deteriorated sharply, whilst the technological intensity of exports decreased and the imports bill continued to be rigid, as it was concentrated in intermediate and capital goods with few domestic substitutes. Second, (low-skilled) wage gains in services sectors created a cost-push inflationary dynamic. These two constraints were tightened whenever growth picked up, delineating a key fragility of the pattern of accumulation.

This chapter explores in further depth the distributional dynamics of the growth and redistribution episode, taking a class approach to the structure of inequality and its changes in Brazil. Several social indicators evolved favourably during the 2000s, after deteriorating or stagnating in the previous decade. From 1995 until 2002, the number of poor individuals rose by 10,000,000 and unemployment increased by 4 pp, whilst inequality fell by a single Gini point.[51] By contrast, between 2003 and 2013 the Gini coefficient of household per capita income inequality fell by around 0.06, unemployment dropped 3 pp, the share of informality amongst low-skilled workers decreased by 13 pp, and there were 33,000,000 less people living under the poverty line and 16,000,000 less under the extreme poverty line. Altogether, the period that began in 2003 represented a substantial break from the previous pattern, even if the intensity or duration of the redistributive process was not sufficient to deliver a minimally equal *level*: with a Gini coefficient of 0.529 in 2013, Brazil still competed for the top positions in world-rankings of inequality.

In order to explore the characteristics of this redistributive process, with a view to identifying its advances and shortcomings, this chapter approaches the distribution of income and its changes from several angles. Focusing on the period between 2003 and 2013, but against the backdrop of the preceding decade, it sequentially looks at the composition of income according to different sources (labour income, pensions, social security benefits...), the progressivity of these income-sources and their presence along the whole distribution, before moving onto a class-based decomposition of the Gini index. Throughout the analysis, the results are interpreted in connection to a set of key policies – real MW hikes, greater pension coverage and the introduction of CCTs – and to the overall dynamics of accumulation, particularly as regards the regressive structural change and its employment and wage dynamics. The conclusions point to a process fundamentally based on redistributing income between different categories of workers, with professional ones losing in relative terms to those in low-skilled occupations, whilst capital-based income and the position of employers in the social hierarchy was preserved.

[51] All statistics in this paragraph were calculated by the author, based on data from the PNADs, except for poverty. The latter was obtained from Ipeadata, which also uses data from the PNADs but implements regional price-level adjustments. See chapter 2 for definition of low-skilled workers.

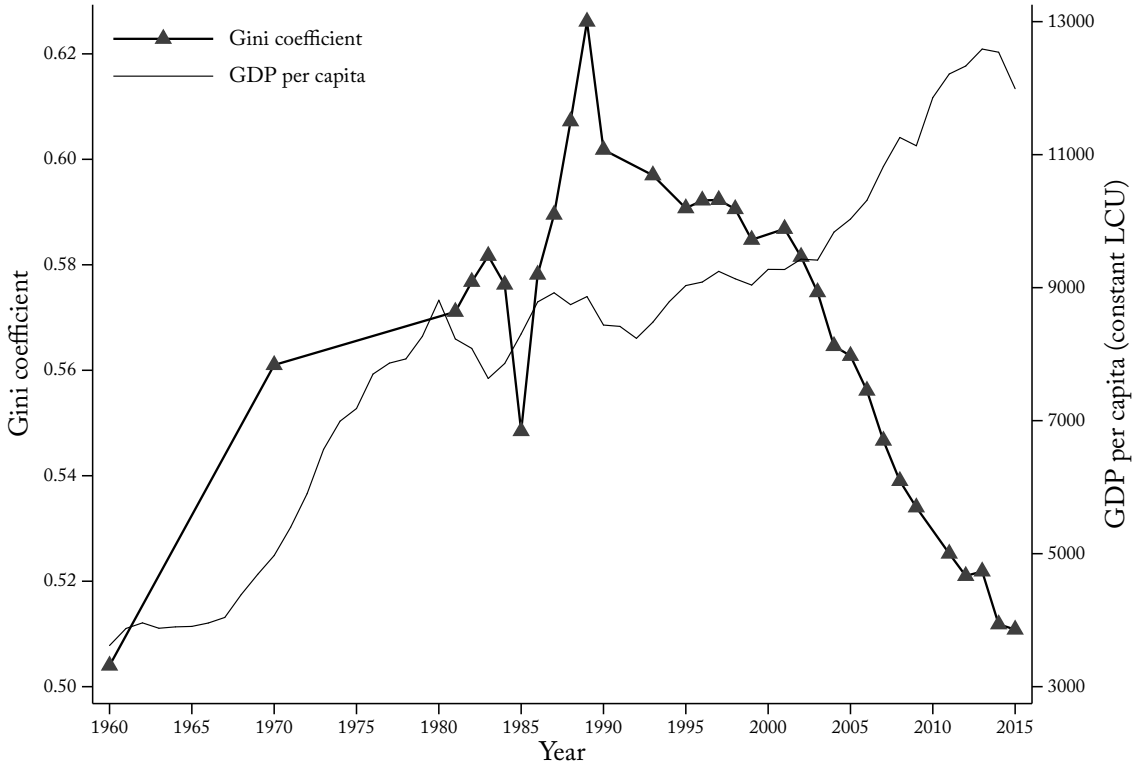
This chapter is organised as follows. After this introduction, section 4.2 contextualises the recent distributive dynamics in Brazil and decomposes the Gini coefficient of household per capita income into eight income-sources (five types of labour-market earnings, pensions, social security benefits and other sources). The section explores the changing composition of income, both at the aggregate level and across percentiles of the distribution, underscoring the importance of CCTs in the bottom quartile, rising MWs and labour formalisation in the second and third, and of pensions along a greater range. Section 4.3 then uses the ANOGI decomposition, applied to households identified by their class position. The results indicate the key role of the regressive structural change as a driver of redistribution, particularly through the relative devaluation of professional labour, as well as limitations of the process, insofar as capital-based income was preserved and deeper structures of inequality were not transformed. Section 4.4 concludes.

4.2. The changing composition of income in Brazil: the key role of labour informality, the real minimum wage and pension coverage

The Gini coefficient of per capita household income inequality in Brazil fell by 0.067 between 2001 and 2013, based on information available from household surveys.[52] This was roughly an average fall for Latin American countries during the same period (see Table 1.3 and Figure 1.1, in chapter 1, for more details), above that of Chile (0.055), Colombia (0.052) and Mexico (0.047), but substantially below that of Argentina (0.115), Bolivia (0.150) and Ecuador (0.091). With this decrease, the Gini index in Brazil reached 0.522 in 2013, which made it no longer be the undisputedly most unequal country in the continent: its distribution of income had become comparable to that of Colombia (0.529) and Honduras (0.526). The redistribution process of the 2000s hence was a sizeable episode, but not to the extent that could transform the deeply entrenched patterns of inequality in the country; by any standard, Brazil remained one of the most unequal societies in the world in 2013. Not only that, but the recent redistribution was furthermore insufficient to undo the income-concentrating effects of the preceding four decades, as the country's Gini coefficient in 2013 was higher than in 1960 (Figure 4.1).

[52] This paragraph uses the same data used to calculate the information presented in Table 1.3 and Figure 1.1 (see their notes for details). Data are taken from the World Bank's PovcalNet platform, which uses the microdata from national household surveys. Given some harmonisation procedures the Bank introduces, the values for Brazil are not exactly the same as in the rest of the chapter, but the differences are insubstantial for the purposes at hand.

Figure 4.1 Income inequality and GDP per capita in Brazil, 1960-2015



Notes: The Gini index refers to household per capita income inequality.

Source: Prepared by the author based on data from: Hoffmann (2017a: 88) for income inequality in 1960 and 1970, which uses data from the national censuses; from the Socio-Economic Database for Latin America and the Caribbean (SEDLAC) database for inequality since 1981, which uses data from the PNAD surveys; and from the World Bank for GDP per capita (constant 2003 reais).

In spite of its limitations from a comparative perspective, the redistributive process was indeed of great relevance for the country, furthermore because it was the only period of time during the last 60 years that combined income redistribution with a substantial rise of per capita income, as seen in Figure 4.1. The twenty years between 1960 and 1980 saw a sizeable increase of inequality, with the Gini index increasing from 0.504 to 0.571, whilst GDP per capita more than doubled, from R$ 2669 to R$ 6499 per year.[53] These decades included the largest part of the military dictatorship (1964-1985) and the final decades of import substitution industrialisation, in a pattern of accumulation structured around fast growth, structural change, income concentration and political repression (Hoffmann 2017a, Hoffmann and Duarte 1972, Saad-Filho and Morais 2018, Tavares 1974). From 1980 until 1995, GDP per capita stagnated and inequality crept up in a volatile pattern – the former rose by 2.5% and the Gini index by 0.02 over the whole period – as the country confronted the foreign debt crisis, high inflation and the transition to neoliberalism (Belluzzo and Almeida 2002, Carneiro 2002, Saad-Filho and Mollo 2002). From 1995 until 2002, both dimensions were essentially stagnant, albeit slightly on the positive side: GDP per capita grew by about 4% over the whole spell whilst the Gini index

[53] GDP per capita in constant Brazilian reais of 2016. Data from the World Bank.

decreased by about 0.01. This occurred as the country privatised state assets, increased the flexibility of labour regulations, introduced a rigid macroeconomic framework and underwent a regressive structural change that decreased the quality of available jobs, but also implemented the first CCT schemes and brought down inflation to single or double digits (Carneiro 2002, Medeiros 2009, Mollo and Saad-Filho 2006, Saad-Filho and Morais 2018).

The period between 2003 and 2013 hence constitutes the core of the growth and redistribution process, a historical novelty in the country's history since at least 1960. By the end of 2013, GDP per capita was 33% higher than in 2002, reaching R$ 26,430 per year (in 2013 reais), whilst inequality had fallen by 0.06, reaching 0.522. As argued throughout the thesis, the main thrust of this process was a cumulative-causation process that made growth and redistribution feed back onto each other over a period of time. Chapter 3 explored in more depth the structural-change element of this process, showing that growth was domestic-led and that employment creation was concentrated in low-productivity, labour-intensive, relatively low-paid sectors producing wage-goods and services – particularly construction and sales. It also indicated how rising MWs and social security transfers kick-started and then further stimulated the process, exogenously raising effective demand by increasing lower incomes. This chapter explores the redistributive dynamics of this process in further depth.

The specialised literature on inequality has highlighted that the key proximate drivers of redistribution during the last decades in Brazil were labour market-related developments, followed by the extension of state pensions and the introduction of CCTs, particularly the scheme PBF. Using income-source decompositions of the Gini index applied to household surveys (the PNADs), Hoffmann and Oliveira (2014) estimated that these three dimensions responded, respectively, for about 55, 22 and 17% of the decrease of the Gini coefficient between 2003 and 2011. Azevedo *et al*. (2013), using a Shapley-value decomposition also based on the PNADs, arrive at similar conclusions. Comparing Brazil to other countries in Latin America, the authors also show that the strength of these drivers was close to the continent-wide average, except for a stronger role of pensions in Brazil, which accounted for 18% of the decrease in inequality as opposed to a continent-average of 9% (see also Cornia 2014b, Lustig *et al.* 2013).

The lower concentration of labour market earnings has in turn been explained by reduced labour informality and, especially, rising MWs. There is considerable uncertainty around the precise estimates of the contribution of each factor, but it has been established that the equalising process was characterised overall by a compression of the lower tail of the distribution. In this broad frame, certain studies highlight the role of higher MWs,

which might have accounted for up to 80% of the fall of the Gini index of labour market earnings (Komatsu and Menezes Filho 2015, Maurizio and Vázquez 2016), whereas labour formalisation and lower skill premia for workers with higher education also played a role (Galiani *et al.* 2017, Lustig *et al.* 2013, Maurizio 2014). Ferreira *et al.* (2017), whilst supporting these broad conclusions, underscore the equalising effects of lower returns to experience (i.e. the conditional wage gap between young and more experienced workers fell) and estimate that, although skill premia did decrease during the 2000s, this was counterbalanced by a greater share of workers with higher education.[54] Also, there is evidence that labour formalisation and lower skill premia in large measure were the result of the higher relative demand for low-skilled as opposed to high-skilled workers, as was the case throughout Latin America (Galiani *et al.* 2017, Maurizio 2014, Tornaroli *et al.* 2014).

Higher MWs also had an impact beyond the labour market, however, affecting the distribution of state pensions and social security benefits, given that several benefits are indexed to the MW.[55] Orair and Gobetti (2010) indicate that government transfers to households rose by 2 pp of GDP between 2002 and 2010, 40% of which can be explained by rising minimum MWs. Demographic changes and labour formalisation (through the access it grants to benefits such as unemployment insurance) were also relevant factors explaining the rise of government transfers (Gobetti and Orair 2015b). Importantly, given that the recipients of income-flows indexed by the MW are mostly in the bottom-half of the distribution, MW hikes had a clearly equalising impact: Brito *et al.* (2017) estimate that the overall impact of rising MWs on household per capita income inequality might account for as much as 64% of the total fall of inequality between 1995 and 2014, although there is substantial uncertainty surrounding the precise estimates.[56]

In spite of these undeniable gains in the bottom of the distribution, driven by labour formalisation, higher MWs and greater social security benefits, recent studies using fiscal data have questioned the extent to which top incomes were affected in recent decades (Afonso *et al.* 2017, Gobetti and Orair 2016b, Medeiros and Castro 2016, Medeiros *et al.* 2015, Morgan 2017, Souza and Medeiros 2015). According to these sources, inequality proved much higher than in household surveys, and top incomes were more stable over

[54] The so-called 'paradox of progress' (Bourguignon *et al.* 2004), it occurs when a greater supply of workers with higher education increases inequality due to sufficiently high skills premia.

[55] As explained in section 3.2 (chapter 3), the floor of state pensions and of unemployment insurance, and the social security scheme for the elderly called BPC, are all defined as one MW, so they get automatically readjusted when the MW changes.

[56] The main reason for this uncertainty regards how to understand, model and estimate the knock-on effect of rising MWs. The results of the different studies mentioned above all point to a strong equalising effect, but the exact numbers are harder to pin down.

time. These data suggest that the top 1% appropriated about 25% of national income between 2006 and 2011, and the 0.1% approximately 10% (Medeiros *et al.* 2015). The richest 71,000 families, in 2013, may have appropriated nearly 8.5% of national income (Gobetti and Orair 2016b). Furthermore, capital-related income played a key role at the top: restricting the sample to the 10% richest households, it accounted for 26% of the inequality in 2006, and 39% in 2012 (Medeiros and Castro 2016). These studies do not invalidate results based of household surveys, given there are shortcomings with the different data sources and no problem-free way of combining them (Hoffmann 2017b). They do, however, indicate the need of taking into account the underestimation of top incomes in the PNADs, particular capital-related income.

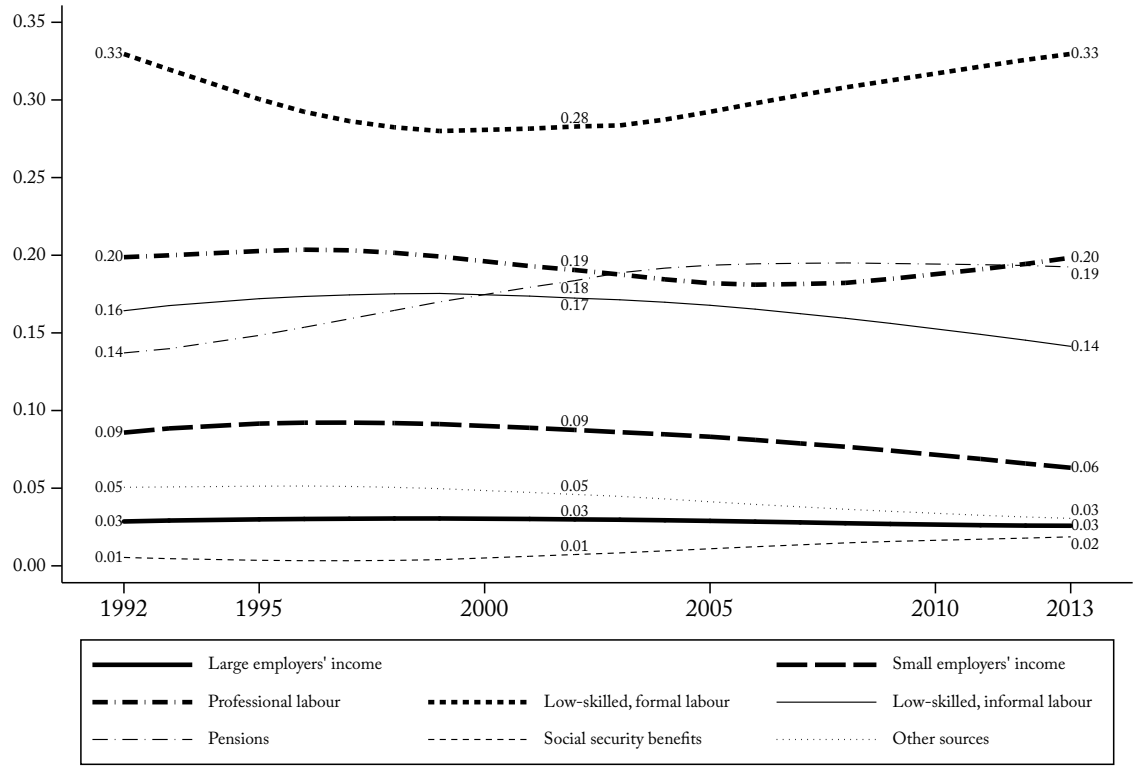
Although these studies have cast great light on how redistribution operated in Brazil since the 2000s, a key point that has been relatively neglected is to identify under which conditions and to which extent the redistribution of income could be prolonged, i.e. its limits as one element in a larger development strategy. As discussed above, the inequality literature has located and measured the impact of key distributional policies, whereas the broader Brazilian development literature (e.g. Biancarelli 2014, Carneiro 2012) has proposed that redistribution was a key pillar of the growth process under the PT governments (2003-2016). An encompassing look at growth and redistribution, their relationship, and their future conditions of possibility is still needed, however.[57] This is particularly true given the economic, social and political crisis from which the country has not yet emerged at the time of writing, and whose solution in a progressive way might require different levers than those operated during the 2000s. What is lacking, therefore, is a dynamic account of Brazil's income distribution capable of identifying its drivers, its place in the pattern of accumulation, and how it produced shortcomings as it evolved. In other words, an explanation of how the mutually implicated developments in growth, structural change and income redistribution created medium-term constraints that could not be overcome under the prevailing framework.

Given this broad characterisation of the process, Figure 4.2 analyses the changing composition of household income in Brazil between 1992 and 2013, divided into eight income-sources. This provides a first look into the structure of inequality in the country, then complemented by looking into the progressivity of these income-sources, in Figure 4.3, and by exploring their presence along percentiles of the distribution, in Figure 4.4 and

[57] The works of Rugitsky and Carvalho (Carvalho 2018, Carvalho and Rugitsky 2015, Rugitsky 2017), important points of dialogue for this thesis, are a partial exception. Nevertheless, their treatment of inequality, enlightening though it might be, is mostly qualitative, and would benefit from closer consideration and measurement.

Figure 4.5. In the next section, this is taken further by looking into the structure of the distribution of income decomposed by the class position of households.

Figure 4.2 Shares of different income-sources in total household income, Brazil, 1992-2013



Notes: Lowess smoothing applied. Smoothed values shown for 1992, 2002 and 2013. See chapter 2 for the definition of class positions and the income associated to them. Pensions include private and public pensions. Social security benefits include all values below 2 minimum wages of the variable 'interest on savings or other financial investments, social security benefits or other forms of income' (for a similar procedure validated through the use of other data sources, see Hoffmann 2013b) and other variables related to social security benefits, which together are expected to incorporate BPC and the CCT scheme PBF. Other sources include real estate rents, donations, labour income of non-classified individuals, and values above two MWs of the variable 'interest on savings or savings or other financial investments, social security benefits or other forms of income'.

Source: Prepared by the author based on data from the PNADs.

As seen in Figure 4.2 (see also Table A3.1), low-skilled, formal labour was by far the main source of income in Brazil between 1992 and 2013, representing between a quarter and a third of total household income, followed, in a changing order, by professional labour, pensions, and low-skilled, informal labour. Together, these four sources represented slightly over 80% of total income during the period, whilst low-skilled labour alone, in both formal and informal conditions, represented between 43 and 50%. This indicates the centrality of low-skilled wages in determining the well-being of the largest part of the population, as expected, but also gives further testimony to the underestimation of capital income in the database: for the sake of comparison, and bearing in mind all the differences in methodology, the capital-share of income in national accounts for Brazil has not been

below 40% at least since 1950 (Marquetti *et al.* 2017, Marquetti *et al.* 2010), whereas the income-share of employers in household surveys was around 10 to 12% since 1992.

The main changes in turn refer to the income-shares of low-skilled labour, particularly its formal contingent, followed by pensions and, at a further remove, small employers' income, professional labour and social security benefits. The decrease of about 5 pp in the share of formal wages between 1992 and 2002 (from 33 to 28%) came as the result of rising unemployment, which escalated from 7 to 10% between these two dates (data from the PNADs), as well as the rise of informality and lower relative wages for low-skilled workers (this is further explored in section 4.3). In broader terms, the fall of formal, low-skilled wages was driven by the productive and institutional restructuring of the economy, which furthered deindustrialisation and the country's integration into low-value-added segments of the global economy, producing an overall low-growth model dependent on foreign capital inflows (Carneiro 2002, Dedecca 2005, Morais *et al.* 1999, Nassif *et al.* 2015).[58]

Meanwhile, during the 1990s the income-share of pensions grew by about 4 pp, from 14 to 18%. There were demographic processes behind this, but the main factor were legislative changes. In particular, the 1988 Constitution and Law 8.213, of July 1991, introduced a universal, non-contributory old-age pension for rural workers (at 60 years of age for men, and 55 for women), with a value equal to 1 MW (Beltrão *et al.* 2000, Delgado and Cardoso Jr 1999). This cemented the role of state pensions as the key income-supporting dimension of social security in the country, which has not changed since then. Furthermore, this expansion of benefits indexed at 1 MW reinforced the previously mentioned process whereby MW hikes have progressive impacts beyond the labour market.

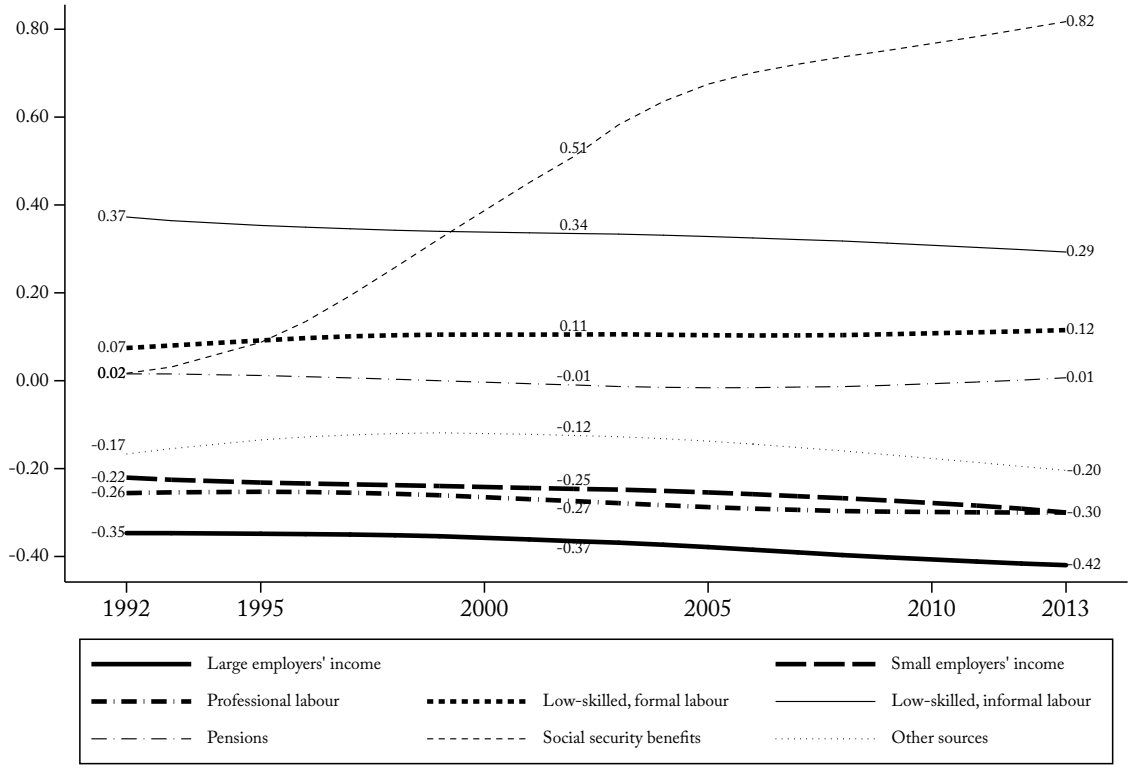
Since the beginning of the 2000s, but particularly since 2003, the key change was the reversal of the trend for formal wages, which began to grow in detriment of their informal counterpart and of the income of small employers. By 2013, formal wages had recovered the share they represented in 1992 (33%), whilst informal wages accounted for 14% of total income, a value 4 pp below their peak in 1999. Importantly, as argued below, this was driven by labour formalisation, as opposed to rising wage gaps for formal versus informal workers (see also Maurizio 2014). This latter period also saw a substantial rise of other social security benefits: this income-source rose from about 0.2% of total income in the mid-1990s to 0.5% in 2002, and then to nearly 2% in 2013. There were two reasons for the increase of social security benefits: the introduction of PBF, in 2003 (for a history of the implementation of PBF, see the contributions in Campello and Neri 2013), and the

[58] Nassif *et al.* (2015) indicate that manufacturing lost 3.5 pp of value-added in Brazil between 1990 and 2000, with employment becoming more concentrated in natural resources-based segments of the sector.

increase in the real value of MW-indexed social security benefits, such as BPC (for an analysis of the different benefits, see Hoffmann 2013b). The rise of the income-share of benefits represents, at the same time, a near-tenfold increase and a small overall source of income, important though it might have been for households at the bottom of the distribution (see below).

Finally, the income of small employers decreased by 3 pp, or nearly a third, as it went from 9% in 2002 to 6% in 2013. The reason behind this decrease was a concentration of capital income, as argued in the next section, based on a decrease of the number of small employers alongside the maintenance of their relative income. The stability of the income-share of large employers, at about 3% between 1992 and 2013, further attests to this process of capital concentration.

Figure 4.3 Progressivity (overall Gini minus concentration index) of different income-sources relative to total household per capita income in Brazil, 1992-2013



Notes: Lowess smoothing applied. Smoothed values shown for 1992, 2002 and 2013. See notes to Figure 4.2.

Source: Prepared by the author based on data from the PNADs.

In sum, *over the two decades the main changes regarded swings in low-skilled wages – both formal and informal – and in pensions*. During the first ten years, this was grounded on labour informalisation in a low-growth economic scenario, with increasing precariousness for low-skilled workers, whilst the effects of previous legislative changes and of demographic pressures increased pensions. This happened through, amongst others, the introduction

of a non-contributory element and the setting of a floor equal to one MW for the lowest benefits. The decade from 2003 until 2013 saw a reversal of the trends for low-skilled workers, with higher output growth leading to stronger job creation, lower unemployment and formalisation, whilst the income-share of small employers lost ground. In terms of social security, pensions increased slightly, as the main change during this latter decade was the implementation of CCTs, even if they represented a small portion of total income.

Figure 4.3 in turn reports the progressivity of the different sources of income, the levels of which followed the expected order (see also Table A3.2). As explained in chapter 2, the progressivity of an income-source equals the overall Gini minus its concentration index (in this case, relative to total household per capita income), hence it is negative for relatively concentrated sources and positive otherwise. At the very bottom were the profits of large employers, extremely concentrated amongst higher-income households,[59] followed by the sources of income associated to the middle-class positions of professional workers and small employers. Pensions kept a near-zero progressivity, indicating the existence of high- and low-value payments which made them spread over the whole distribution, and they were followed by the three relatively progressive sources: formal and informal low-skilled wages and social security benefits.

The main absolute change of progressivity over the two decades refers to social security benefits, which went from a near-neutral source to an index of 0.82. The break really began in 1997, although the smoothing procedure suggests a slightly earlier date. In spite of the inflection in progressivity having happened in 1997, the economic impact of the process began in earnest only after 2003, when its share of income doubled to 1.2% (in 2004) and then continued to rise up to about 1.8% of total household income until 2013. The reasons for this are clear: the introduction of CCTs, initially under the presidency of Fernando Henrique Cardoso (1995-2002) and later greatly expanded under Lula (2003-2010). The very targeted nature of these transfers allowed them to have a non-negligible impact on inequality, estimated around 20% of its decrease between 1995 and 2011 (Hoffmann 2013b), although they represented a small share of income (their presence along the distribution of income is examined below).

As for the other sources, it is noticeable that most reduced their progressivity in relation to total household per capita income over time, with the exception of pensions and formal wages.[60] As explored in more detail below, this points to two key phenomena. First, the

[59] Their concentration index (i.e. the progressivity index plus the overall Gini) was essentially unchanged at 0.95 throughout the whole period, which means both that this source of income could hardly have been more unequal and that it continued to be received by households at the same (top) position (see Table A3.3).

[60] Given that the scenario was one of falling inequality, this means that the concentration indices of most sources did not decrease as quickly as that of the distribution as a whole. The concentration indices per se of the income of large and small employers were essentially stable, whilst that of professional salaries and

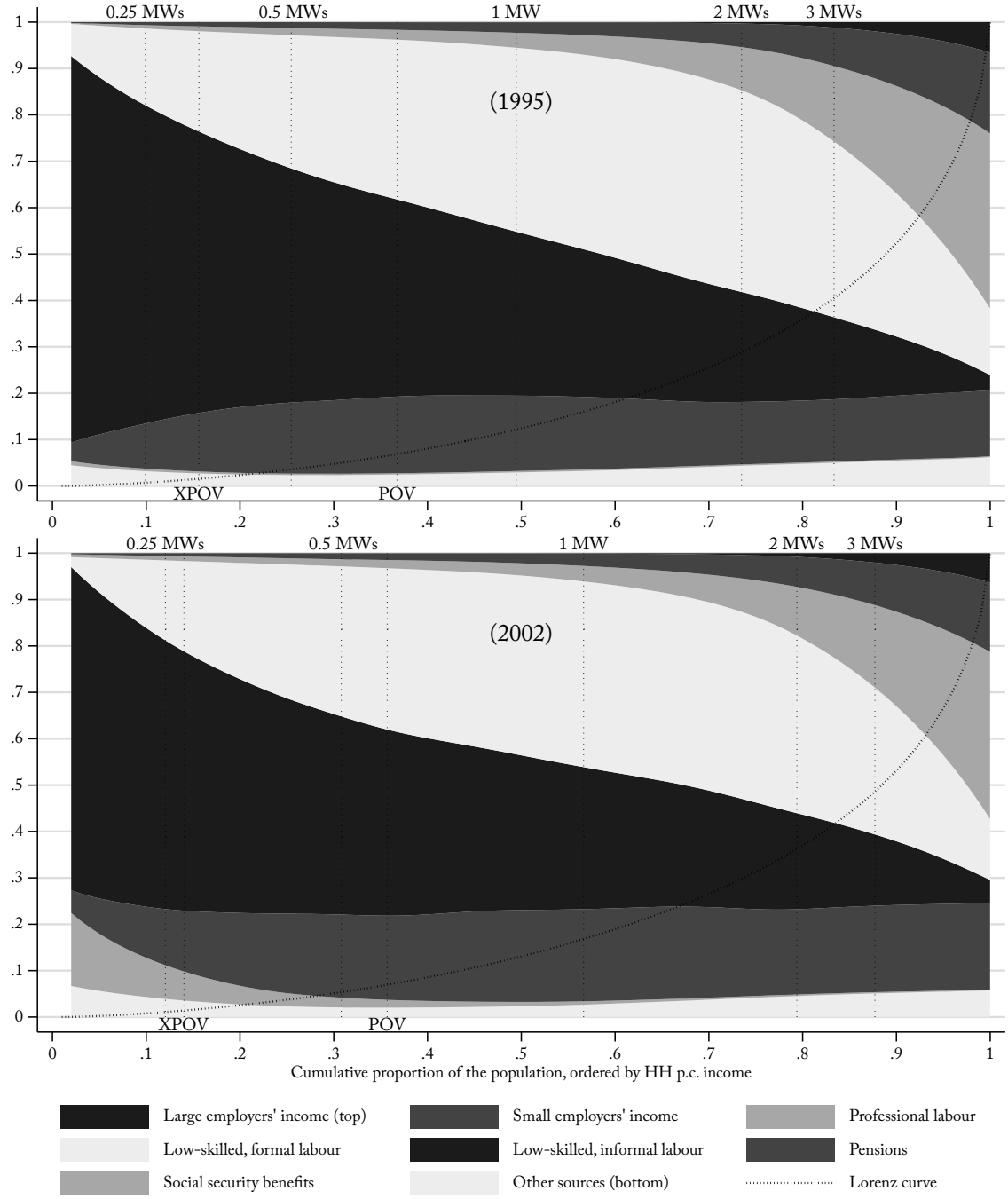
income of large and small employers continued to be extremely concentrated at the top of the distribution, with virtually unchanged concentration indices (which in a context of falling overall inequality led to lower progressivity). Second, the rise in the progressivity of formal wages, simultaneous to the decrease of their informal counterpart's index, suggests the greater spread of formal occupations to those in the lower tail of the distribution – i.e. low-skilled labour formalisation. In sum, *the top of the distribution remained substantially similar in its composition of income, whereas pensions increased throughout and formal wages became more present in the bottom*.

The impacts of these processes of increased pensions and social security coverage, low-skilled labour formalisation, and continuity at the top of the distribution can be explored in more depth through Figure 4.4 and Figure 4.5. Both explore the composition of household income across the whole distribution, based on the same income-sources analysed above, for different points in time. They order households by their per capita income in the X-axis, from lowest to highest, and display on the Y-axis the average composition of income for that percentile of the distribution. Figure 4.4 compares 1995 and 2002, whilst Figure 4.5 compares 2002 and 2013.

The data presented in Figure 4.4 paint a striking picture of inequality and destitution. The clearest summary of this is that, in 1995, the top 1% highest-income households held about 14% of total income, more than the whole bottom half (about 12%). Meanwhile, nearly 37% of the population were below the poverty line (US$ 4.00 per day) and about 15% below the extreme poverty line (US$ 1.90 per day). This structure of high inequality and poverty was driven by four factors: the lack of a social safety net, which did not provide income-support for the most destitute (as seen above, social security benefits were basically absent); labour informality, associated to low pay, particularly below the minimum wage (about 40% of households were in the position of low-skilled, informal workers, as shown below); the low value of non-contributory pensions (the effects of which are seen below); and an extreme concentration of capital and privilege at the top.

of the wages of informal, low-skilled workers decreased, respectively, by 3 and 2 points between 2003 and 2013. See Table A3.3.

Figure 4.4 Shares of different sources of income along percentiles of the distribution of household per capita income in Brazil, 1995 and 2002



Notes: Lowess smoothing applied. See notes to Figure 4.2. Poverty (POV) defined as household per capita income below US$ 4.00 per day, using the 2011 PPP conversion factor applied to local currency units deflated according to the INPC index. Extreme poverty (XPOV) is the same, but using US$ 1.90 per day line. Social security benefits are hard to visualise in 1995 given their near absence.

Source: Prepared by the author based on data from the PNADs.

Although there were some changes in the bottom quintile of the distribution until 2002, the continuities were much stronger. The top 1% continued to appropriate a slightly larger share of total income than the bottom 50% (13.3% for the former, 13.1% for the latter), with (extreme) poverty mostly constant. What could be seen was the rise of social

security benefits for the bottom 20% of households, in lieu of informal wages. If social security benefits could barely be seen in 1995, they came to represent between 4 and 8% of the income of the bottom quintile in 2002. In spite of these marginal variations, social security benefits continued to account for a very small share of the income throughout the distribution.

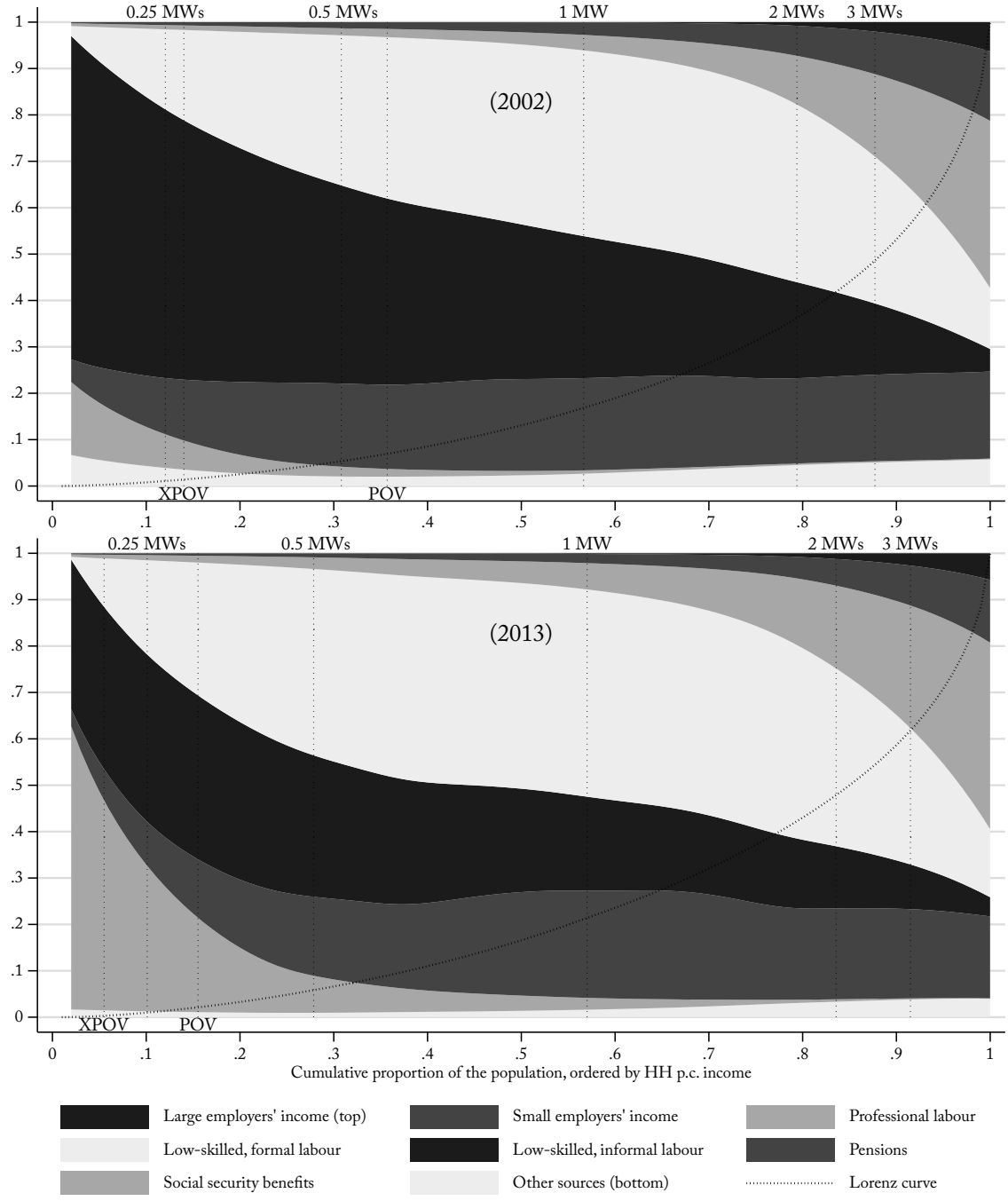
To a very large extent, in 2002 most households relied on low-skilled, informal labour. For the bottom 40% of households, the latter was the main source of income, above which it was superseded by low-skilled, formal wages. Professional occupations in turn started to be relevant really only for the top 10% of households, at a per capita income of approximately three MWs. Finally, at this point in time pensions had already become relevant throughout most of the distribution, which highlights both the wide spread in pension benefits – from one MW for most former workers, particularly after the introduction of the non-contributory element, to the salaries of top civil servants – and their centrality for household budgets throughout Brazil.[61]

The position in the distribution of fractions and multiples of the MW is particularly telling about the structure of inequality in Brazil in 2002.[62] A per capita income of one MW would already have put a household amongst the top 40%, revealing striking levels of inequality (which, as seen below, did not change much). Importantly, about a third of the population had an income below half a MW, representative of households with two low-skilled workers and two school-age children. The reason behind this was the high levels of informality, which are associated to incomes below one MW (nearly 40% of low-skilled, informal workers received less than one MW in 2002, according to the PNAD). Moreover, such households would be below the international poverty line, which is a very low standard indeed, meaning that the MW was incapable of sustaining the basic needs of a person and a dependent. Even more striking, a per capita income of a quarter of the MW – representative of a four-person household with one low-skilled, formal worker – was below the extreme poverty line. Given the latter's definition as the minimum income necessary to buy a sufficient amount of food and nothing else, it is not too far off the mark to say that *the 2002 MW was a starvation wage for a family*. In short, with high labour informality and unemployment and a small increase of the real MW, *inequality shifted little between 1995 and 2002, apart from the impact of greater pensions and social security coverage in the bottom quintile*.

[61] For the impact on inequality of different kinds of pensions, see Hoffmann (2009).

[62] The reason for fractions being relevant is that, although full-time formal workers always receive at least the MW, its translation into household per capita income will depend on the size and number of active workers in the household. The most representative values are for a quarter, half, and one MW.

Figure 4.5 Shares of different sources of income along percentiles of the distribution of household per capita income in Brazil, 2002 and 2013



Notes: Lowess smoothing applied. See notes to Figure 4.2 and Figure 4.4.
Source: Prepared by the author based on data from the PNADs.

As shown in Figure 4.5, the structure of inequality changed more significantly between 2002 and 2013 than during the preceding decade, even if the shifts were concentrated in the bottom half of the distribution. The two most evident processes were rising social security benefits and low-skilled labour formalisation. If benefits were a small portion of household income in 2002, eleven years later they were the major source for the bottom decile and were relevant for all of the lowest quartile, in evidence of the impact of PBF on

lower-income households. PBF transfers were sufficient to remove most households from extreme poverty, the levels of which consequently fell by about 60%, from 14.0 to 5.5% of the population.

It is worth pointing out that, in spite of its undeniable poverty-alleviating effects, PBF could only become such an important source for low-income households because of Brazil's glaring inequalities. The bottom quartile received just under 5% of total household income in 2013, which made the relatively small values of social security transfers, around 2% of total household income, considerably relevant for this group (for an analysis of how CCTs are the key form of social policy in neoliberalism, underscoring their limitations as a tool to reduce vulnerability and promote development, see Saad-Filho 2015).

The big change for the second quartile was in turn labour formalisation, as low-skilled formal wages became the largest form of income for this group. Pensions increased their share only slightly, much less than in the preceding period, as they grew at roughly the same rate throughout the whole distribution. Hence, however shifts to pension income might have been more muted between 2002 and 2013, they did have a positive impact on (amongst other) low-income households. Changes to the third quartile were much less strong, comprising slight increases of professional salaries, pensions and formal wages (in detriment of small employers' income and informal wages), whereas the composition of the fourth quartile was essentially unchanged. The top half was much more stable, therefore, highlighting that distributional gains were concentrated in the bottom: the processes at play did not have a substantial impact on the highest incomes.[63]

Figure 4.5 also highlights the importance of another key driver of redistribution, rising MWs. Between October 2002 and the same month of 2013, the real MW increased by about 73%.[64] This was particularly effective in a context of labour formalisation and economic growth (data from national accounts indicate that about 20,000,000 net jobs were created between 2002 and 2013; see chapter 3), which, as argued throughout the thesis, were mutually reinforcing processes. In this vein, labour formalisation is expected to decrease the percentage of the population receiving less than certain fractions of the MW, which, true to form, it did. In fact, it led to a fall of about 3 pp in the share of the population with a per capita income equal to or below a quarter of the MW, counterbalanced by a similar increase in those living with between half and one MW.

[63] A partial exception regards the income of professional labour, which is studied in greater detail in the next section. In 2013, similar to the picture of 2002, it was only a substantial source of income above three MWs, but it had acquired a modestly higher presence at lower levels. This suggests a loss of relative income for skilled labour.

[64] October is chosen as the month of reference because the PNAD goes to field in the last week of September. Values deflated by the National Consumer Price Index (Índice National de Preços ao Consumidor, INPC).

The impact of rising MWs can furthermore be seen in their relation to the poverty lines. In a process of qualitative import, one MW became capable of putting a worker and a dependent considerably above the poverty line, which goes a long way towards explaining the 20 pp decrease of the poverty rate. The international poverty line at US$ 4.00 per day is a very low standard, unrepresentative of the level above which individuals are not deprived of key goods, but rising above it does mean that individuals can enter the market as consumers for more than very basic necessities. In other words, *rising MWs alongside labour formalisation and job creation made large sections of the population consumers of a much broader and more sophisticated array of goods, as they escaped the lowest levels of destitution*. At the same time, it is also relevant that in 2013 fewer households – some 4 pp less – had a per capita income above 2 or 3 MWs. This in turn reflects the regressive structural change dynamics in place, discussed in the previous chapter, which limited the creation of well-paid jobs and hence curtailed gains in living standards.

This section cast a first look to the changes the distribution of income underwent in Brazil between 1992 and 2013, focusing on the growth and redistribution episode from 2003 to 2013. It has shown that the decade until 2002 was marked by volatile GDP per capita and a near-stagnant distribution of income, with growing labour informality and unemployment framing a picture of destitution. The introduction of non-contributory pensions in the beginning of the period and the timid roll-out of CCTs towards the end were relevant processes, however incapable of determining a significant downwards trend to inequality. The following decade saw a more robust equalising process, focused though it might have been at the bottom of the distribution. Rising MWs, CCTs, low-skilled labour formalisation and economic growth reinforced each other, driving gains for low- and middle-income households. Schematically, CCTs affected the very bottom, formalisation the first quartile, and rising MWs and pensions the second – and to an extent the third – quartile. Together, they reduced poverty substantially and, through the relative stability that formal employment offers, inserted millions of individuals into the market as consumers of a broader swathe of goods. In spite of this, top incomes were much less affected, particularly that of large employers, whose share and concentration were essentially stable throughout the period.

4.3. Class inequality in Brazil: a capital-preserving redistribution between workers

The previous section explored inequality in Brazil from the perspective of income-sources, identifying how the composition of household per capita income changed since 1992, particularly in the bottom half of the distribution. The main phenomena were MW hikes

and the expansion of pensions and social security, which operated with different strength since 1992, and the varying trends of low-skilled labour informality, which grew during the 1990s and reverted afterwards. Particularly between 2003 and 2013, these three factors converged in a progressive process that reduced destitution and inequality, raised income in the bottom of the distribution, provided an enhanced but still meagre social safety net, and enlarged the access to formal jobs and pensions.

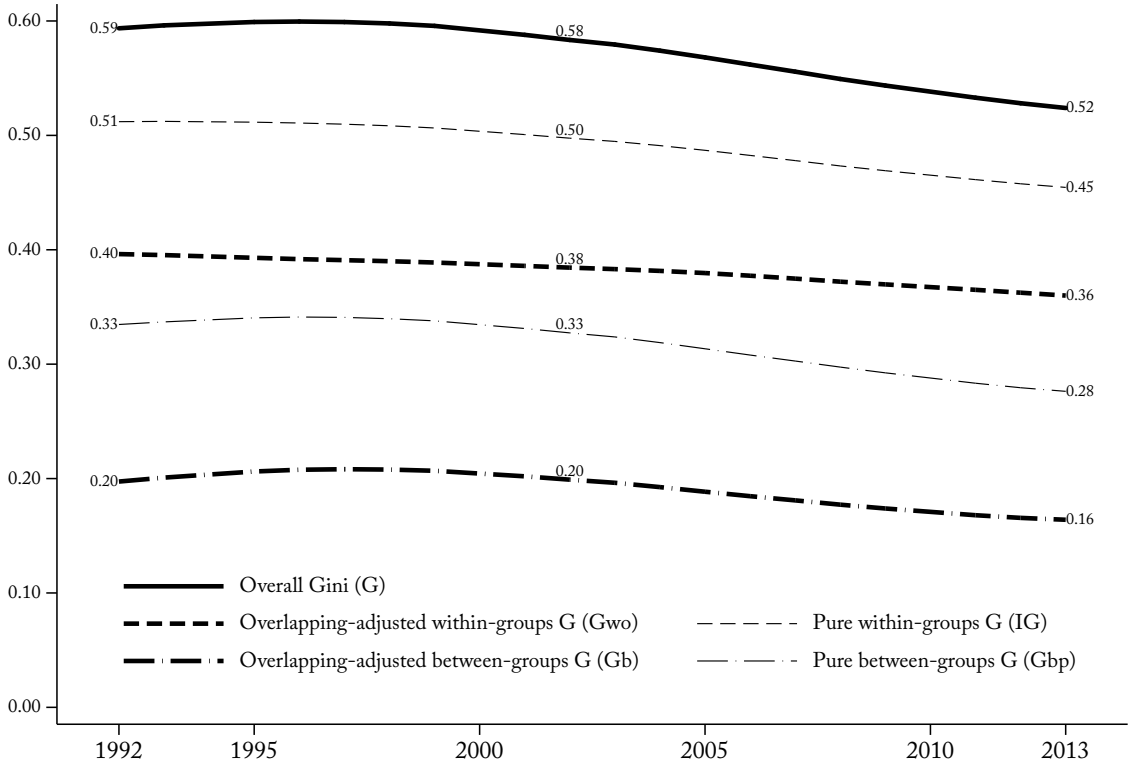
This section explores inequality in terms of its class dimension, through the ANOGI decomposition, which allows for a closer identification of the drivers and the limits of redistribution in Brazil. After an overview of the results for the overall decomposition, a detailed analysis of the developments for the main classes is presented. It is shown how within-class inequality fell over all the period, whereas between-class inequality increased during the 1990s and fell in the following decade. This latter process was restricted, however, to changes between different categories of workers, with the position of capital vis-à-vis labour essentially unchanged. It is shown how the main driver was the decrease of the relative income of professional workers, in turn caused by the regressive structural change dynamics in place, whilst low-skilled labour formalisation also played a relevant, but secondary role.

Figure 4.6 reports the breakdown of inequality into the within- and between-groups components for the whole period (see also Table A3.4). A first observation, which vindicates the framework employed, is that between-class inequality was a relevant phenomenon throughout, as it accounted for between 30 and 35% of total inequality. Likewise, there was considerable stratification across class positions over the whole period, since overlapping reduced the pure between-groups Gini by only about 40% (a situation of absolute stratification makes the overlapping-adjusted and the pure between-groups components be equal, as explained in chapter 2, and they grow apart as overlapping increases). Therefore, the general picture was one of stark inequality and stratification over the two analysed decades, although with a downwards trend.

The overall movements of inequality, with a slight rise during the beginning of the period followed by stagnation and then a consistent decrease, hide different class dimensions. Whilst the within-class inequality coefficient decreased by between 0.01 and 0.02 during the 1990s, depending on the years of comparison, between-class inequality increased by approximately the same amount. Similarly, stratification increased considerably, as the ratio between G_b and G_{BP} increased by some 3 pp. This period encompassed the end of high inflation, which happened in 1994, as well as the transition to neoliberalism. Therefore, if neoliberalism did not imply an overall increase of inequality as big as in other countries (the median increase of the Gini coefficient in Latin America between 1990 and 2000 was

of about 0.04; see Figure 1.1 and Table 1.3, in chapter 1), it did reshape the distribution of income, with both an increase of class inequality and a sharper demarcation of class positions.

Figure 4.6 Household per capita income inequality in Brazil, ANOGI decomposition by class positions, 1992-2013



Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Smoothed values shown for 1992, 2002 and 2013.

Source: Prepared by the author based on data from the PNADs.

Particularly after 2002, on the other hand, both within- and between-class inequality fell, with a concomitant decrease of stratification. The leading dimension in this latter period was inequality between classes, whose coefficient fell by around 0.04, or about double the decrease of the within-groups component.[65] The increase of overlapping between class positions can in turn be seen through two values. First, the overall measure of stratification, the ratio between G_b and G_{BP}, decreased by about 2 pp. Second, the pure within-groups components fell by approximately 0.05, as compared to 0.02 for its overlapping-adjusted version. Hence, the equalising process of the 2000s also meant that certain class fractions increasingly came to share the same space in the distribution of income (as shown below,

[65] Souza and Carvalhaes (2014) studied the inequality of labour-market earnings in Brazil, between 2002 and 2011, applying a decomposition of the Theil index to a typology of class positions based on Figueiredo Santos (2005). Their results also indicate a slight decrease of the between-class component, which accounted for about 4 pp less of total inequality in 2011, although they do not explore which fractions were the relevant ones in such process.

the main factor was that professional workers begun to occupy the same space as low-skilled, formal workers).

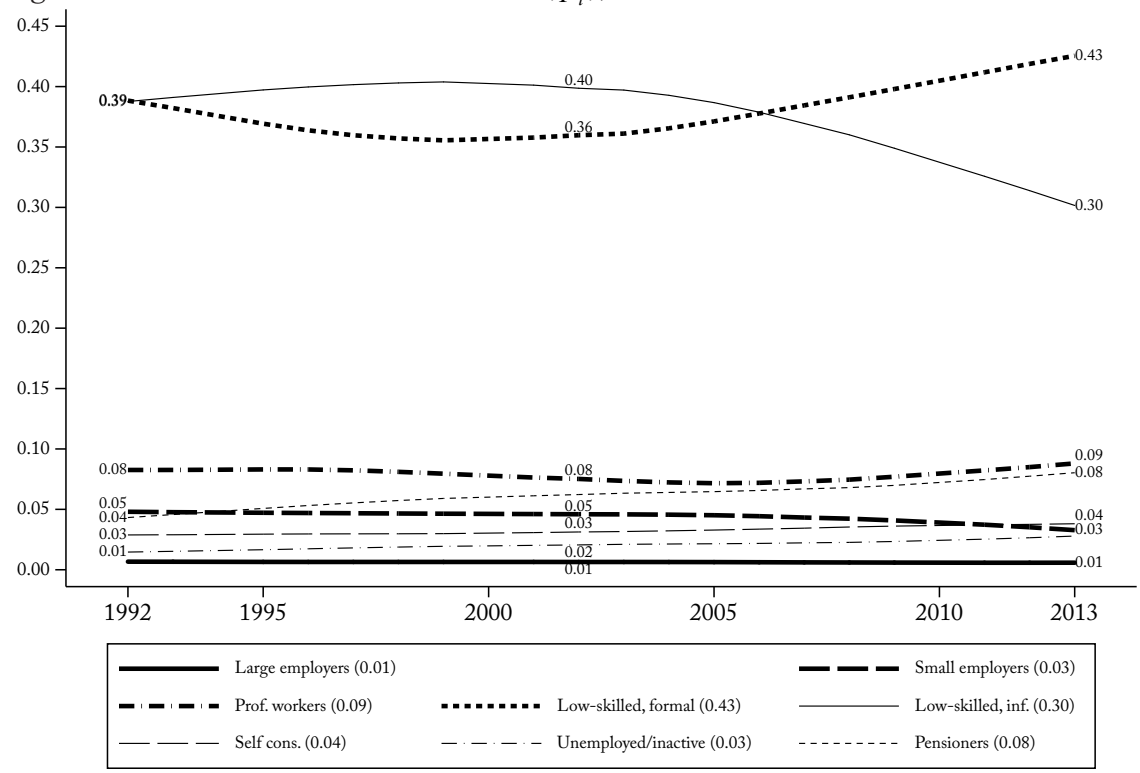
In light of this, the question is to identify the processes that led to a continuous fall of within-class inequality and to the contrasting trends of between-class inequality during the two decades, relating them back to the phenomena highlighted in the previous section and chapter – i.e. to the overall pattern of accumulation. This is done by exploring the components of the decomposition on a group-by-group basis (the size, within-group concentration, relative income, mean rank and overlapping of each fraction), in Figure 4.7 through Figure 4.12. This includes measuring the impact of two key changes, the structure of class positions, in Figure 4.8, and their relative income, in Figure 4.10.

The analysis reveals that there were losses for most of the popular classes during the 1990s, followed by nuanced gains afterwards. The latter comprise a class structure with smaller shares of more vulnerable positions, as well as closing income gaps for some groups. These gains were, however, tempered by an almost-unchanging position of workers vis-à-vis large employers, whereas only professional workers really lost relative income, rank and status. In other words, relations between different groups of workers changed, but their position to capital was much more stable, in line with the argument of a cumulative-causation process based on labour formalisation, regressive structural change, growth and redistribution.

The dimension that (alongside within-group concentration) saw the greatest changes throughout the two sub-periods regards the class structure, i.e. the population-share of each fraction. As seen in Figure 4.7, the formal and informal low-skilled working class changed considerably, with approximately 10 pp swings between trough and peak: after a substantial process of precarisation during the 1990s, this was reverted in the following decade. Apart from this, the other two relevant developments were the increase of professional workers, of about 2 pp during the 2000s, and of pensioners, with an accumulated rise of approximately 4 pp spread over the decades. As previously discussed, this latter process has both a legislative dimension, with the introduction of non-contributory pensions in the early 1990s, and a demographic factor, with the ageing of the population.[66]

[66] Pensioners live in households with and without members active in the labour market. The class position used in the thesis regards pensioners-only households, which corresponds to the minority of total pensioners, but a sizeable and growing one: whereas 26% of those receiving pensions lived in pensioners-only households in 1995, this rose to 29% in 2002 and to 35% in 2013. This also highlights the key income-supporting role of pensions in a multiplicity of households in Brazil.

Figure 4.7 Size of class fractions in Brazil (p_i), 1992-2013

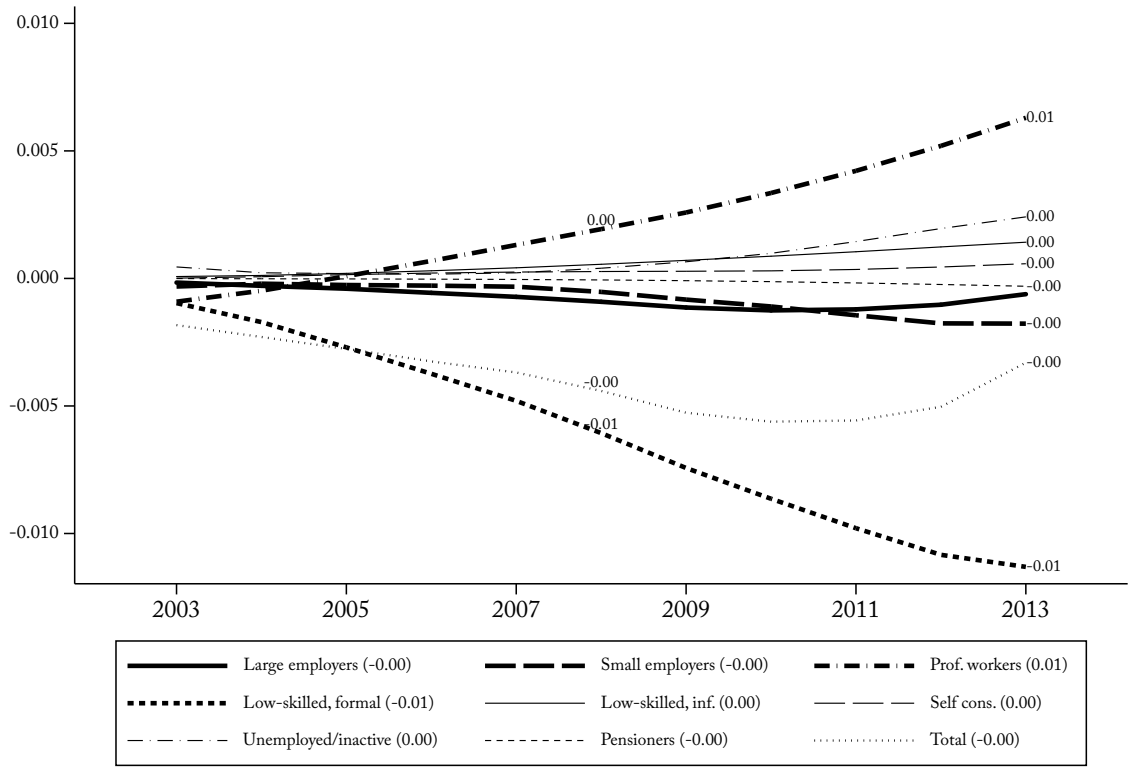


Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Smoothed values shown for 1992, 2002 and 2013.

Source: Prepared by the author based on data from the PNADs.

Informality, an important dimension of labour precariousness, reached its peak in 1999 (41% of the population), stayed around this level for some years, and then decreased sharply, reaching 30% in 2013. As its corollary, the formal working class would only return to its population-share of 1992 (39%) in 2007, having reached a nadir of 34% in 1999. Low job-creation, sluggish growth and labour flexibility were the drivers: during these seven initial years, of the 6,000,000 net low-skilled jobs created, only 1,400,000 were formal, whilst unemployment rose by 3 pp and GDP per capita decreased during two years (employment data from the PNADs, GDP data from the World Bank). The rise of labour informality thus clearly shaped class inequality during the 1990s, and was a key dimension of the latter's decrease afterwards. This should not obfuscate, however, that in 2013 more than 30% of households were part of the low-skilled, informal working class – and hence in a very precarious position not even covered by basic labour laws.

Figure 4.8 Impact on inequality of changes in the size of class fractions in Brazil, 2003-2013

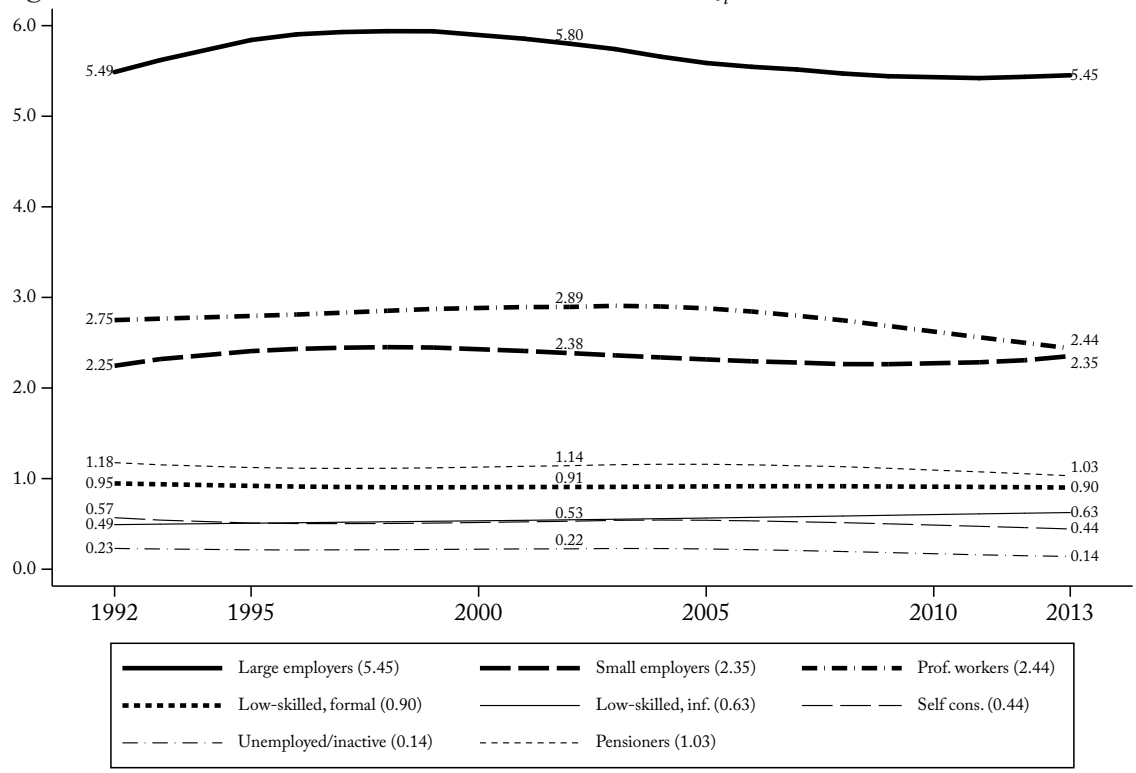


Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Smoothed values shown for 2008 and 2013.

Source: Prepared by the author based on data from the PNADs.

Figure 4.8 brings the impact on inequality of changes in the size of class fractions between 2003 and 2013 (i.e. taking 2002 as the reference year). Although the total effect of shifts between all class fractions was not of great significance, there were two opposing trends which were noteworthy. On the one hand, the formalisation of low-skilled labour – based on an increase of around 7 pp in their population-share – reduced the Gini index by approximately 0.01, about 16% of the total decrease over the period (between 1992 and 2001, greater informality spiked up the Gini by 0.008). On the other hand, the much smaller increase of about 2 pp in the size of professional workers counterbalanced this effect, as it raised the Gini index by approximately 0.006. This happened because of the highly unequal position of professional workers in Brazil, which made a 1 pp increase in their size have an absolute impact on inequality about 3 times higher than a 1 pp formalisation of low-skilled workers (with, of course, opposite signs). Moreover, the efficacy of labour formalisation as a driver of redistribution (i.e. the expected impact on inequality of a transition between the positions of informal, low-skilled workers to that of formal, low-skilled workers) decreased some 12% between 2002 and 2013, in view of the slightly closing gaps between the relative income of these two fractions (seen below).

Figure 4.9 Relative income of class fractions in Brazil (η_i), 1992-2013



Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Smoothed values shown for 1992, 2002 and 2013.

Source: Prepared by the author based on data from the PNADs.

As seen in Figure 4.9, relative income – i.e. the mean household per capita income of a class fraction, divided by overall mean per capita household income – was much more stable than the size of class fractions (although as shown below it had a greater impact on inequality). During the 1990s, there were small gains of about 5% for all privileged fractions (i.e. with mean income above unity), with the obverse holding for relatively low-income ones. There were two exceptions, pensioners, whose relative income went from 1.18 to 1.14, and informal workers, whose relative income went from 0.49 to 0.53. In the case of the former, this was likely due to the introduction of non-contributory pensions, the low value of which decreased the overall mean income of the group. As for informal workers, their gains in relative income were misleading, as their number had been rising through the precarisation of previously formal workers. All in all, it was a decade of sharpening inequality across class lines.

From 2003 until 2013 there was a partial inflection of these trends, albeit more nuanced, the main change having been the decrease of about 16% in the relative income of professional workers (from 2.89 to 2.44). On the higher-end of the class structure, the relative income of small employers was stable, whereas large employers, if they did lose in relative terms, did not experience a very substantial impact (around 6%, from 5.80 to 5.45). This highlights that *the ownership of capital became a more efficacious means of climbing the social ladder, as*

compared to the possession of scarce skills. In the middle, pensioners lost around 10% (from 1.14 to 1.03), compensated for by a similar relative increase for informal workers (from 0.53 to 0.63), whilst formal ones were stable.

The regressive structural change influenced the relative income of skilled versus non-skilled occupations in two ways. First, by raising the overall relative demand for low-skilled workers, as opposed to professional ones. On this regard, data from the PNAD indicate that the mean salary of professional workers grew, in real terms (deflated by INPC), by 5.6% between 2002 and 2013, whereas the wages of formal and informal workers grew on average 23.7 and 39.4%, respectively. Second, taking only into account the employment of professional workers, the productive structure also shifted towards activities with below-average remuneration for them, linked to the provision of wage-goods and services. The sector that created the most professional posts between 2002 and 2013, adding about 2,4000,000 jobs and increasing its employment-share of the group by approximately 8 pp, was health and education, whose mean remuneration was about 20% below the overall mean of professionals (for the overall changes in the productive structure, see chapter 3).

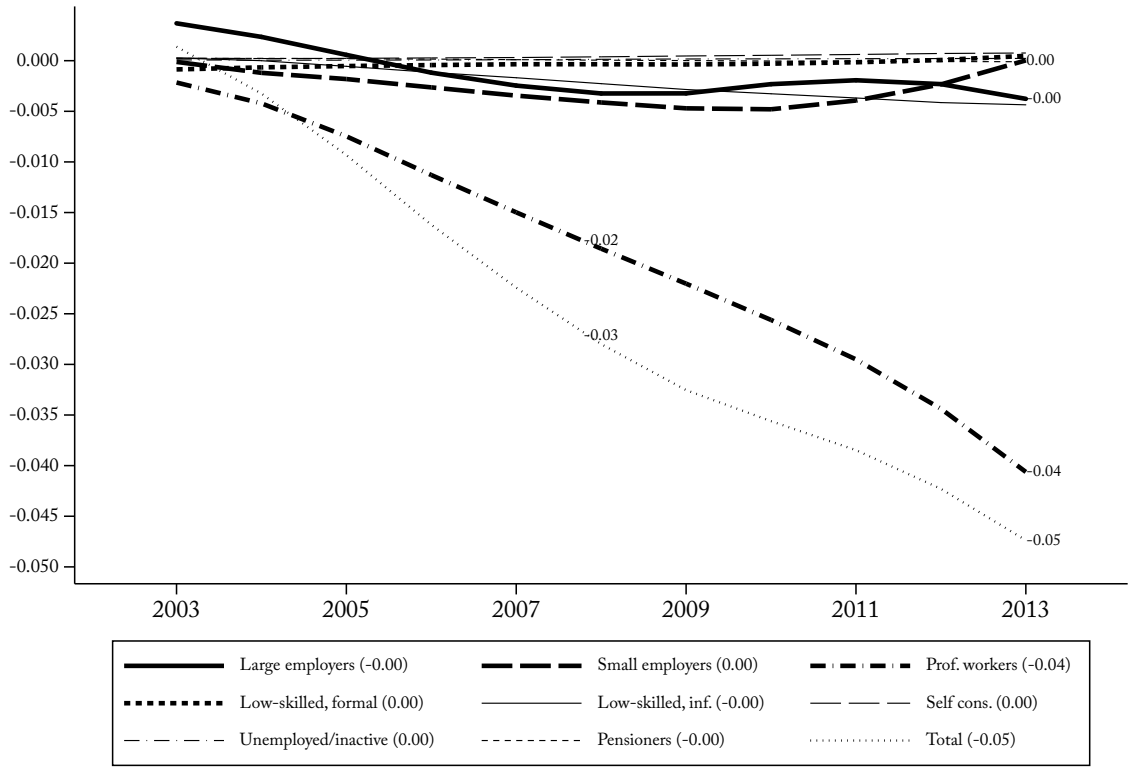
These results can be further explored with a simple shift-share analysis. The objective variable to be explained are variations of the real mean labour-market income of professional workers, seen as a function of changes in the sectoral structure of employment and of sectoral mean salaries.[67] The growth of their salaries by 5.6% was influenced by two diverging factors: shifts to the sectoral structure had an estimated impact of -3.5%, compensated for by a within-sector increase of 9.2%. This highlights how the regressive structural change had far-reaching distributive impacts, decreasing the overall demand for professional workers and, within this group, decreasing the demand for the best-paid occupations. This is supported by studies for Latin America, such as Galiani *et al*. (2017), that indicate that demand-side factors (i.e. changes to the productive structure and the patterns of effective demand) were the most relevant aspect in explaining changes to skills premia, and by in-depth studies of specific professions in Brazil (Lins *et al.* 2014). Nevertheless, the increase of the population with higher education, a proxy for the supply of potential professional workers, is likely to have also played a role, as the share of individuals active in the labour market with tertiary education rose from 7 to 13% between 2002 and 2013 (data from the PNADs).

[67] Formally, let μ be the overall real mean labour-market income of professionals, p_s and μ_s be the s-th sector's employment-share and real mean labour-market income of professionals, Δ be the difference operator between two points in time, and the * superscript identify the average value of a variable between two points in time. Then, $\mu = \sum p_s \mu_s$, and $\Delta\mu = \sum \Delta p_s \mu_s^* + \sum p_s^* \Delta\mu_s$, where the first term in the right-hand-side is the structural-change effect and the second is the within-sector effect.

Moving to the lower-end of the distribution, the 10% increase in the relative income of informal workers during the last decade was noticeable. There were two main factors behind this: the increase of PBF transfers, which went from 1% of the total household income of the group in 2002 to 4% in 2013, and the formalisation of members of the household, which made formal wages increase their share from 10 to 12%. It is also likely that rising MWs acted as a 'lighthouse' effect for informal workers, that is, although the MW legislation was not actually enforced for the group, it served as an effective informal benchmark for their remuneration (for a study of this process throughout Latin America, see Tornaroli *et al.* 2014). As evidence for this, data from the PNADs indicate that about 52% of informal workers received between 1 and 3 MWs in 2002, a value which decreased but slightly to 49% in 2013, although the share of those earning less than the MW did rise by 5 pp (to 44%).

A counter-intuitive result was that the relative income of low-skilled, formal workers did not increase, even in face of a 73% hike in the real MW between October 2002 and October 2013 (the relative income of low-skilled workers as a whole – i.e. including formal and informal ones – did increase, by about 7 pp). The main reason was a strong compression of wages between one and two MWs: in 2002, 44% of formal low-skilled workers gained more than two MWs, a value that fell to 31% in 2013. This compression explains much of the de-concentration of the group's income, but also indicates that well-paid positions were not forthcoming during the decade. Which is to say, although the left-tail of the distribution was rising through MW hikes, the right-tail was being shortened. This decrease of well-paid jobs, in turn, can be explained by the sectoral dynamics. The sectors that created the most posts were sales, food and lodging, and construction: together, they added about 6,800,000 formal, low-skilled jobs between 2003 and 2013 (a 6.5 pp increase in their share, according to data from the PNADs), and they paid around 7% less than the overall average wage of this group of workers in 2013. *This reinforces how widespread were the effects of the regressive structural change, driven by the growth of low-valued added and relatively low-paid wages goods and services, reducing inequality between and within groups of workers*.

Figure 4.10 Impact on inequality of changes in the relative income of class fractions in Brazil, 2003-2013



Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Smoothed values shown for 2008 and 2013.

Source: Prepared by the author based on data from the PNADs.

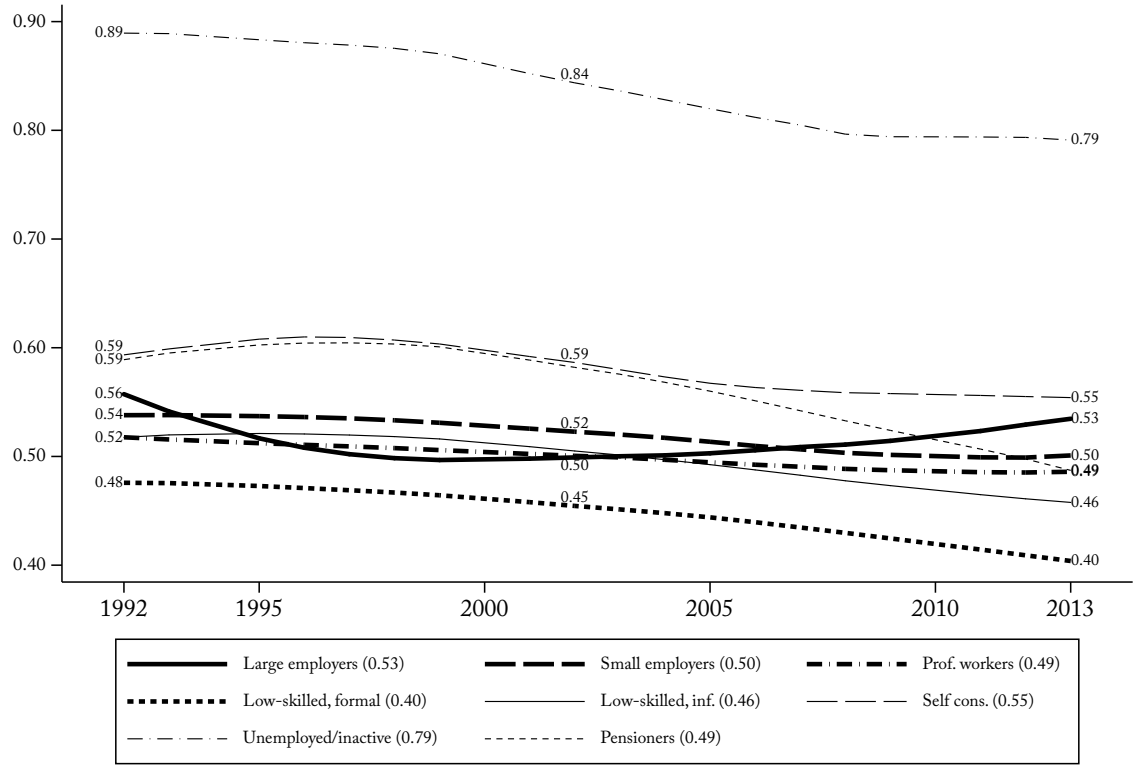
Figure 4.10 clearly reveals the key equalising role played by the relative devaluation of professional salaries during the second decade, which dwarfs all other (mildly equalising) developments. In fact, this was the single most important proximate cause of the decline in inequality between 2003 and 2013, responding for a decrease of around 0.04 in the Gini. Even if one were to discount the 0.006 increase caused by the rising population-share of professional workers (see Figure 4.8), the estimates still point to a massive equalising effect. The reason for this large impact regards the particularly privileged position of the Brazilian middle-class, which made a decrease of 10 pp of relative income (e.g. from a relative income of 3.0 to 2.9 times the national average) for professional workers have an estimated impact of about -0.006 on the Gini index during the latter decade.[68] In other words, the substantial income gap between professional and non-professional workers was a strong determinant of the overall distribution of income, which was hence rather sensitive to swings in it. Given that the relative income of professional workers fell from

[68] The sensitivity of inequality to changes in the relative income of small employers, also part of the middle-class, is smaller than that of professional workers. This is only due to the larger population-share of professional workers, however, which makes them control a bigger portion of total income – and hence raises the overall impact of changes to their relative income. Discounting for their population-share, the sensitivity of inequality to changes in the relative income of both middle-class groups is essentially undistinguishable (see chapter 2 for the difference between the two measures).

around 2.89 to 2.44 from 2003 until 2013, this led to the estimated decrease of 0.04 in the Gini index.

Changes to the two dimensions studied so far, the size and relative income of class fractions, together explain around 80% of the decline in inequality from 2002 until 2013. This indicates, first, the relevance of approaching inequality from a class perspective. Second, it underscores the key role the regressive structural change played, through its relative decrease of professional salaries and as an engine for low-skilled labour formalisation (it had a further impact in intra-class concentration, studied below). Third, by locating the class fractions whose developments were the most important – workers, and not employers – it delineates the overall character of the redistributive process, which preserved capital-related income.

Figure 4.11 Intra-class concentration of income of class fractions in Brazil (G_i), 1992-2013



Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Smoothed values shown for 1992, 2002 and 2013.

Source: Prepared by the author based on data from the PNADs.

Within-groups income concentration, shown in Figure 4.11, if it did present an overall decreasing trend over the two decades, nevertheless had levels that varied substantially between the several class fractions. The unemployed and inactive are a particular group that combines a majority who are involuntarily excluded from employment and a minority with access to resources that allows them to live off rents, which, combined to scarce social

safety nets, explains the high concentration of income in the group (between 0.79 and 0.89). Disregarding them, throughout the two decades there was a gap of slightly more than 0.10 between the concentration of the most equal and unequal class fractions, whilst only the income of formal, low-skilled workers was substantially less concentrated than that of the whole population. The coefficient of formal workers was consistently around 0.12 below the overall Gini, whereas the second less-unequal group (informal, low-skilled workers) was about 0.07 below. Nevertheless, the intra-group Gini of formal workers in 2013, of 0.40, was still rather high by developed-country standards: the OECD average coefficient of household disposable income, in 2014, was 0.32 (OECD 2016).

That even the income of formal, low-skilled workers – the most homogeneous group – was concentrated by OECD standards highlights how income inequality is a multifaceted phenomenon in Brazil, the decrease of which requires changes to each class fraction, to their position vis-à-vis each other, and to the class structure as a whole. The processes that define class positions clearly have strong impacts, which can be seen, for example, in the fact that in 2013 large employers had an income on average almost nine times higher than informal, low-skilled workers, whilst professional workers earned on average 2.7 times what formal, low-skilled workers did. Stronger labour organisation and a more equal distribution of higher education, for example, could be effective upon the processes that define these aspects of class inequality. For the country to approach OECD-levels of inequality, however, this would not be sufficient, given the high concentration of income internal to each group. This, in turn, would likely require a stronger social safety net, capable of decreasing inequality across the board, and a less heterogeneous productive structure, which could reduce the inequality in labour-market earnings for each class fraction.

In terms of its movement over time, within-groups income concentration followed a similar pattern for most classes, with a slight decrease during the 1990s that picked up pace in the following decade (large employers were the outliers, discussed below). The most relevant trends regard low-skilled workers and pensioners. The Gini of formal and informal low-skilled workers decreased around 0.02 between 1992 and 2002, and then a further 0.05 until 2013, when they reached 0.40 and 0.46, respectively. As discussed above, rising MWs and the regressive structural change were key factors behind this, which respectively compressed the lower-tail of the distribution and reduced the quantity of highly paid jobs (see also Komatsu and Menezes Filho 2015, Maurizio and Vázquez 2016).

A quick estimation of the impact of sectoral changes on the internal distribution of labour-market income for formal and informal low-skilled workers is revealing. Using the remuneration of an individual's main job as the objective variable whose concentration is

studied, restricting in each case the sample to a single class fraction (i.e. formal or informal workers), and classifying the workers according to their economic activities, the overall impact of sectoral changes can be apprehended as the sum of the effects of a changing (sectoral) population-share and changing relative (sectoral) wages.[69] Between 2002 and 2013, these impacts were, respectively for formal and informal low-skilled wages, of -0.019 and -0.033. The distribution of education within these groups was a further factor, however: the Gini coefficient of the number of years of education for formal, low-skilled workers declined from 0.30, in 1992, to 0.24, in 2002, and then to 0.19 in 2013. For informal workers, these values were, respectively, 0.39, 0.34 and 0.30. The main change was the share of high-school graduates, which jumped from 20 to 48% for formal workers and from 5 to 25% for informal ones, in both cases between 1992 and 2013.

The largest absolute change in within-class concentration, however, regards the income of pensioners. Their Gini index, after being somewhat stable during the 1990s, fell by a staggering 0.10. Given this group commanded about 8% of household income in 2013, this had a considerable impact on the overall distribution. It was driven by greater pension coverage and, particularly in the latter period, rising MWs. As the latter are used to index many low-value benefits (Gobetti and Orair 2015a), but not higher ones, rising MWs substantially compressed the lower-tail of the distribution of these households.

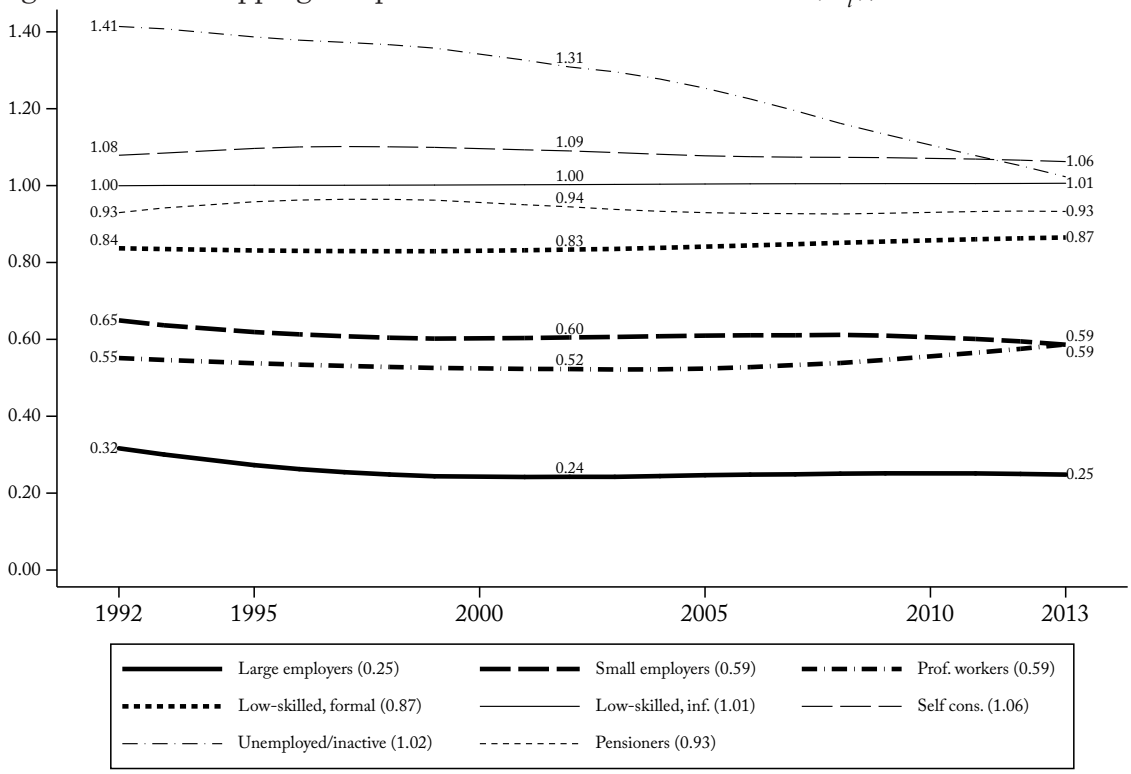
Finally, after an initial fall, the income of large employers became more concentrated throughout the two decades. This suggests an ongoing concentration of capital income, further evidenced by the decreasing population-share of small employers (see Figure 4.7). Which is to say, although the relative income of large and small employers remained substantially high (see Figure 4.9), there were relatively fewer employers and their income more concentrated in the hands of a few (for similar results using fiscal data, see Medeiros and Castro 2016).

Stratification confirms the previous analysis, as shown in Figure 4.12: there was a clearer demarcation of class positions in the 1990s (seen through lower overlapping indices, which imply greater stratification) and a partial inflection afterwards, albeit restricted to different fractions of workers. Between 1992 and 2002, the overlapping coefficient of capitalists went from 0.32 to 0.24, whilst that of small employers went from 0.65 to 0.60 and of professional workers from 0.55 to 0.52. The overall measure of stratification G_B/G_{BP} increased from 0.58 to 0.61 (where 1 indicates perfect stratification, as opposed to O_i).

[69] The method is the same as that used in Figure 4.8 and Figure 4.10, only the group definition, the objective variable, and the sample are different. Instead of studying the impact on household per capita income inequality due to changes in the class structure, for all kinds of households, this studies the impact on labour-market income concentration due to changes in the sectoral composition of employment, for a single class fraction.

Thus, the transition to neoliberalism in Brazil had the effect of normalising accumulation and reorganising class relations in ways that strengthened social hierarchies. This is likely to have been a combined result of several changes to the pattern of accumulation, including the end of high inflation, but the two key aspects were shifts to capital-labour relations and the concentration of capital. As discussed above, during the 1990s there was increased unemployment, informality and income gaps, as well as a productive restructuring of the economy that produced deindustrialisation and the bankruptcy of marginal firms (Belluzzo and Almeida 2002, Nassif *et al.* 2015): in sum, a worsening of the position of workers vis-à-vis capital, which led to the higher relative income of large employers seen in Figure 4.9, and forces increasing capital concentration, seen in Figure 4.11. These two processes, in turn, are expected to have distanced large employers from the rest of the distribution, hence reducing their overlapping coefficient.

Figure 4.12 Overlapping component of class fractions in Brazil (O_i), 1992-2013



Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Smoothed values shown for 1992, 2002 and 2013.

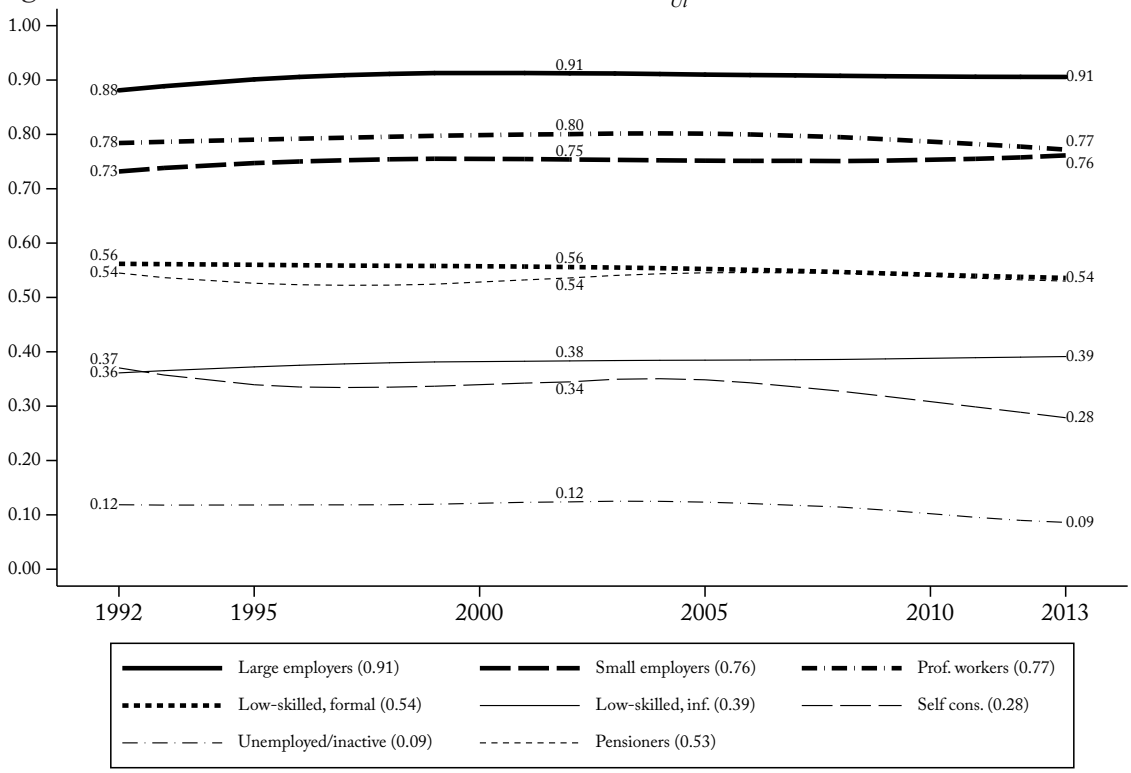
Source: Prepared by the author based on data from the PNADs.

From 2002 to 2013, on the other hand, overall stratification (G_B/G_{BP}) decreased from 0.61 to 0.59, driven by changes within fractions of workers. The overlapping coefficients of large and small employers were virtually unchanged, remaining around 0.25 and 0.59, respectively. Low-skilled, formal workers in turn became less of a stratum, increasing their overlapping coefficient from 0.83 to 0.87, whereas professional workers were the

ones who lost the most distinction – with distinction understood as being the sole group in a particular (high-income) section of the distribution, with the consequent access to exclusive goods and services. Their overlapping coefficient rose from 0.52 to 0.59, in an increase of almost 15%. It is beyond the scope of this work to investigate what social and identitarian repercussions this loss of status and privilege might have implicated for the traditional middle-class in Brazil. It is, nevertheless, a demonstration that this group was the one that gained the least during the 2000s and increasingly had to share spaces with the ascending lower classes, suggesting some measure of *déclassement*.

Therefore, distinctions between different categories of workers grew more blurred throughout the second analysed decade, reducing overall class inequality. At the same, capitalists remained a clear stratum, and small employers became even more demarcated. This latter point, which stands in opposition to the developments for professional workers, supports the argument that the distribution that took place under the PT governments did not confront capital income, the possession of which became a stronger guarantee of social standing, but only relations between workers.

Figure 4.13 Mean rank of class fractions in Brazil (F_{Ui}), 1992-2013



Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Smoothed values shown for 1992, 2002 and 2013.

Source: Prepared by the author based on data from the PNADs.

The final dimension to be analysed, seen in Figure 4.13, regards the mean rank of class fractions, which displayed substantial resilience. The mean rank is the least volatile of all

parameters of the decomposition, as it only takes into account the ordering of individuals and is hence not influenced by extreme incomes. It is thus, in a sense, the core indicator of social hierarchy, the immobility of which underscores there was no overhaul of class relations in Brazil. What could indeed be seen was an enduring structure, with the different class fractions neatly stacked atop each other in the expected order.

Underneath this general picture of continuity, the small changes in mean ranks reinforce the previous analysis: there were gains for privileged fractions during the 1990s, partially reversed in the 2000s for professional workers, but not for employers. Employers (large and small) and professional workers rose by 2 to 3 points in the first decade, in another aspect of the sharpening class inequality of the period, before describing diverging trends. Whereas large employers remained stable during the latter period, professional workers fell by 3 points and small employers rose by 1, highlighting once more the contrasting dynamics of capital vis-à-vis skilled labour under the PT governments. The other relevant development was the closing gap between formal and informal low-skilled workers, which decreased from 10 to 5 points over the two decades. Formal ones had a mean rank of 0.54, in 2013, whilst informal ones had a mean rank of 0.39. These closings gaps, which reduced to an extent the heterogeneity between all low-skilled workers, were driven both by gains for informal workers, such as via CCTs, and by a curtailment relatively better paid low-skilled jobs, due to the regressive structural change. In sum, the evolution of the mean rank of classes indicates that *changes during the 2000s were restricted to relations between workers, and that that profiting from the labour of others became relatively more important than controlling scarce skills*.

This section has investigated the evolution of class inequality in Brazil between 1992 and 2013, identifying that, in spite of there being clear differences between the two decades, the redistributive gains of the latter period were restricted to changes between categories of workers. The 1990s saw an increase of class inequality and stratification, driven by informalisation and greater returns to capital and other privileged class fractions. Towards the end of the decade, within-class inequality began to fall with the implementation of small CCT schemes, timid MW hikes, and a more equal distribution of education across workers.

In the second decade, continuous rises in the value of the real MW, low-skilled labour formalisation, larger CCT programmes, and especially the regressive structural change drove redistribution and reduced stratification, with a stronger impact on between-class inequality. The changing productive structure of the economy impacted not only the relative income of professional as opposed to low-skilled workers – the single most important driver of redistribution – but also the intra-class concentration of different groups of

workers. In the first case, this was down to the economy-wide relative devaluation of skilled labour, the demand for which fell, heating in turn the low-skilled segment of the labour market and raising formalisation levels. In the second case, the reason was that sectors producing wage-goods and services, which grew, had wages below the average for each group of workers. Examples of these activities were health and education, relevant for professional workers, and construction, food and lodging, relevant for low-skilled workers: they all increased their share of employment considerably and paid below-average wages for each category of workers.

If there were narrowing income gaps and greater overlapping between groups of workers in the second decade, the position of employers was much more stable, underscoring the limitations of the redistributive episode. Large and small employers maintained substantially unaltered relative incomes, overlapping indices and mean ranks, differently from professional workers who lost in the three dimensions. It should be highlighted that these conclusions – that the redistribution of income was restricted to developments amongst workers, whereas capital-based income was preserved – are not contradicted, but rather reinforced by studies using fiscal data (Gobetti and Orair 2016a, Medeiros and Castro 2016, Medeiros *et al.* 2015), which are better able to capture top- and capital-related incomes.

The key limitation of how income redistribution operated during the PT governments, therefore, was that it was strongly based on wages and salaries, preserving other sources of inequality. Although there is no space to explore in depth the effects of alternative scenarios, two points are worth mentioning. First, the main change to the social policy matrix was the introduction of the CCT scheme PBF, complemented by the indirect scaling-up of other low-value benefits through MW hikes. There were no larger transformations of the provision of welfare, however, such as the creation of universal social safety nets, the introduction of significant new social rights, or the de-commodification of key goods and services.[70] In this regard, PBF, in spite of its poverty-alleviating results, was much too small to drive a more substantial decrease of inequality. For the sake of comparison, Segal

[70] There were significant stimuli for the private provision of health and education, for example, even if tempered by some support for the public system as well. Ocké-Reis and Gama (Ocké-Reis 2014, Ocké-Reis and Gama 2016) show how tax exemptions and other incentives, to a total amount of just under a third of the Health Ministry budget, stimulated the private provision of healthcare. With this, the profits of private health insurance providers nearly tripled in real terms between 2003 and 2011 (Ocké-Reis 2014), whilst out-of-pocket expenditures on health were one of the fastest-growing items of household budgets between 2002 and 2009 (Medeiros 2015, Posenato Garcia *et al.* 2015). Regarding higher education, there was a simultaneous expansion of the public and private system, although focused on the latter, through a series of incentives and subsidised financing conditions (Carvalho 2013, 2014b, Rezende Pinto 2016). This was synthesised in that, although enrolment in public higher-education institutions increased by two thirds between 2003 and 2014, their share of total enrolment during the period fell from 31 to 25% (Chaves and Amaral 2016).

(2011) indicates that cash benefits in the EU15 countries comprise about 6.6% of GDP, as opposed to the 2% of total household income represented by PBF, BPC and other social security benefits in Brazil.[71] Furthermore, the impact of these cash transfers and of state pensions on wellbeing was diminished through mechanisms that made them end up servicing debt (Lavinas 2013, 2017). PBF, state pensions and the wages of formal workers were increasingly used as a means of accessing credit,[72] which, at the high interest rates practised in Brazil, absorbed growing parcels of their income – as shown in Figure 3.3, in chapter 3, debt service as a proportion of household income jumped from 16 to 22% between 2005 and 2013.

Second, another structural dimension of inequality that was not transformed during the period was the country's particularly regressive taxation system. Gobetti and Orair (2016a) indicate that the effective average income tax rate paid by the top 0.05% of households in Brazil was of 7% in 2013, substantially lower than the top effective rate of 12.3% in the middle of the distribution. With clear bearings on class relations, one of the key drivers of this regressive tax structure is that, since 1995, profits and dividends have been exempt of personal income tax in Brazil, substantially skewing personal income tax to the middle-class and leaving the owners of capital free (Gobetti and Orair 2016b). Furthermore, given the high reliance on indirect taxation, the Brazilian tax system actually makes lower-income individuals pay more overall taxes as a proportion of their income, with strongly regressive effects on the distribution of final income (Silveira *et al.* 2013). These are key determinants of inequality, which could drive a sizeable redistribution of income if they were attacked, but they saw no changes during the PT governments.

4.4. Conclusion

This chapter has adopted a class perspective to explore the distribution of income in Brazil between 1992 and 2013, focusing on the last decade of the period. It has used, amongst others, income-source and group-wise decompositions of the Gini index, and it has also assessed the contribution of different sources of income across percentiles of

[71] The share of cash transfers in Brazil is likely to be an overestimation, given that the variable used in the calculations includes all values below 2 minimum wages of the variable 'interest on savings or other financial investments, social security benefits or other forms of income' in the PNADs, which must include other forms of income.

[72] The key legislative change in this dimension was the introduction of 'payroll loans' (*crédito consignado*), in 2003. This modality of personal credit is characterised by debt repayment instalments being directly deducted from (formal employment) wages or state pension payments (Oliveira and Wolf 2016). In effect, it is a sort of insurance for the lender, which allowed for lower (but still high) interest rates. Payroll loans were the fastest growing modality of personal credit in Brazil, jumping from a nominal stock of R$ 10 billion to R$ 220 billion between January 2004 and December 2013, whereas non-payroll loans went from R$ 20 billion to R$ 98 billion (data from the BCB).

the distribution. Throughout the analysis, the results were interpreted in connection to the overall dynamics of the pattern of accumulation. This revealed important shifts in the levels and structure of inequality and destitution in Brazil and highlighted key drivers of the growth and redistribution process between 2003 and 2013. In broad terms, this latter process was based on distributing relative income from professional to low-skilled workers, whilst preserving capital-based income. Deeper sources of inequality, however, such as the regressive tax system, remained unchanged.

Between 1992 and 2002, overall inequality was essentially stagnant, with a hike in the first years annulled by a comparable later inflection as the economy completed its transition to neoliberalism. This comprised the liberalisation of trade and financial accounts, the privatisation of SOEs, increasing labour market flexibility, bringing down inflation, the timid implementation of CCTs and the introduction of two new macroeconomic frameworks. The first, from 1994, was based on an overvalued fixed exchange rate with high interest rates to attract foreign capital inflows, producing unsustainable balance-of-trade deficits and deindustrialisation that led to a crisis in 1999. The second, from this year onwards, was the 'macroeconomic tripod' of inflation-targeting, flexible exchange rates and primary government surpluses, which structurally curtailed public expenditures and likewise relied on high interest rates. Over this period, GDP per capita grew but very modestly and, although the poverty rate fell with the end of high inflation, the number of people below the poverty line (about 59,000,000) was the same in 2002 as it was in 1992.

This pattern of accumulation determined the overall shape of the income distribution during the 1990s, with two opposing forces: inequality between classes grew over the period, and roughly at the same pace as that internal to the class fractions decreased. On the unequalising side, the factors were greater low-skilled labour informality, higher unemployment, low job-creation, and increasing wage premia for professional workers, alongside rising profitability and relative income for employers. All of these raised the share of precarious class positions and increased income gaps, raising overall class inequality and stratification. On the equalising side, greater pension coverage (as a delayed result of the 1988 constitution), small MW hikes towards the end of the period, the timid rollout of CCTs and a better distribution of education at its different levels decreased within-class inequality, but not to the extent that could offset the upwards forces.

Several of these concentrating trends were reverted in the following decade, as growth picked up and inequality declined amidst improvements in several social indicators. GDP per capita grew over 30% between the end of 2002 and of 2013, as unemployment, poverty, informality and inequality decreased. Importantly, this was the only period since 1960 that combined these positive results. As argued in chapter 3, the dynamics of growth began

with an improvement of foreign conditions, which alleviated the balance-of-payments constraint and provided a stimulus to effective demand during the initial years, and hence opened the way for an inflection in the pattern of accumulation. With MW hikes and larger social security transfers raising low incomes, a cumulative-causation process began which was the engine of growth and redistribution, endogenously leading to low-skilled labour formalisation, the loss of relative income for professional workers and a regressive structural change. This latter process also meant that there were key medium-term constraints, namely growing trade deficits and cost-push inflation, seen through the stagnation of export volumes after 2006, their decreasing technological content, and growing inflation from the middle of the period onwards (see chapter 3).

The evolution of inequality during the latter decade was hence determined not only by the direct impacts of relevant policies, i.e. social security transfers and MW hikes, but also by their knock-on effects through the overall pattern of accumulation, i.e. labour formalisation and the regressive structural change. MW hikes, especially in a context of increasing formalisation that reduced non-compliance with labour legislation, boosted the income of low-skilled workers and compressed the lower-tail of their distribution. It was also a central element in the decrease of poverty, as in 2013 the MW had become sufficient to lift a family with two formal workers and two dependents above the international poverty line, differently from 2002. The effects of MW hikes were, furthermore, boosted due to greater pension coverage, given that the value of a large number of benefits was indexed to the MW. Besides demographic factors increasing the number of beneficiaries, the introduction of a non-contributory pension for rural workers in the previous decade helped shape this situation. The implementation of PBF in turn provided income-support for the most destitute, reducing extreme poverty and, to a smaller extent, inequality. The limited budget of the programme, an inherent element of its targeted and conditional design, restricted its broader impact, however.

Rising MWs and social security transfers interweaved with low-skilled labour formalisation and the regressive structural change to determine the single most important driver of redistribution during the latter decade, the relative loss of income for professional workers. Formalisation and MW hikes increased the income of low-skilled workers as a whole, whilst the regressive structural change operated through two channels. Not only did it decreased the overall relative demand for, and hence the relative income of professionals, but it also increased the share of sectors that employed professionals at relatively low salaries (especially education), further decreasing their relative income. This result of reducing the supply of top-paid jobs was also relevant in explaining the lower concentration of income within each class fraction, as it compressed the higher-end of

each group's distribution. Of course, it also meant that the employment structure became more precarious and concentrated in low-productivity, relatively low-paid jobs, curtailing the transformative potential of the development strategy in the medium term.

This analysis underscores two key limitations of the fall of inequality in Brazil. First, there was a restricted basis for redistribution, limited as it was to relations between different strata of workers. In this vein, the relative income of capitalists was not affected and control over capital became a more efficacious form of climbing the social ladder vis-à-vis the control over scarce skills. Moreover, Brazil's regressive tax structure, the channelling of large amounts of public money to a few hands via interest paid on public debt, and other deeper sources of inequality were not challenged. Given how capital-based income is severely under-represented in household surveys, this in large measure explains why the inequality trends calculated using fiscal data show a much smaller decrease during the 2000s.

The second and most important limitation of the redistributive episode, however, lies in its relation to the broader pattern of accumulation and the constraints it implied. Under the form it took place, redistribution required relatively fast growth rates of output and the continued increase of low-productivity sectors producing wage-goods and especially services, which would reduce the relative income of professional workers and increase formalisation levels for low-skilled ones. This, however, deteriorated the country's insertion into the world market, marred productivity growth, and produced cost-push inflationary pressures. Under these parameters, the whole process was dependent on the commodity boom, which guaranteed, whilst it lasted, medium-term solvency to the balance-of-trade and provided foreign reserves, amplified by high interest rates to attract foreign capital. This allowed for the exchange rate to appreciate as an inflation-controlling mechanism, in spite of it being a process with a clearly limited time frame which further deteriorated the economy's foreign competitiveness.

The form of income redistribution during the PT governments, based on MW hikes and a regressive structural change that raised the relative income of low-skilled workers in services sectors, further specifies the conundrum presented at the end of chapter 3. In effect, growth and redistribution were intrinsically tied processes, and they endogenously tightened the two key constraints of the pattern of accumulation (a deteriorating international insertion and creeping cost-push inflation). Which means that wage growth could not be curtailed, under penalty of dismantling the whole system, unless new sources of demand and redistribution were put in its place. In order not to sacrifice growth and redistribution, therefore, a new framework became necessary, which could attack the economy's constraints and reduce inequality through other means.

Taken together, the restricted character of redistribution and the underlying dependence on the commodity boom show the limitations of the changes Brazil underwent. The cycle exhausted itself, without creating the conditions for new processes of redistribution or growth to take place. This does not mean that wages had grown too much, that social benefits had to be cut or that contractionary fiscal policies were called for. Doing so would simply dismantle the existing pattern of accumulation, driving down growth and concentrating income. On the contrary, the tightening of the economy's constraints suggested the need to operate new levers of redistribution, with a lower impact on inflation, whilst simultaneously developing novel strategies to increase productivity and promote a progressive structural change. For this, a series of more transformative actions had to be adopted, capable of expanding income distribution beyond the labour market and transforming the international insertion of the economy.

5

Accumulation in Argentina during the Pink Tide: fast growth and tightening constraints

5.1. Introduction

Argentina has the dubious honour of having been, since the end of military dictatorship in 1983, the supposed model for two ultimately unsuccessful development strategies. During the 1990s, the country was praised by advocates of the Washington Consensus, who saw in the extensive liberalisation of the economy and its greater integration into the world market the path for Latin America.[73] It was not to be: a massive economic and political crisis at the turn of the century reduced real GDP per capita in 2002 to below its 1969 level, whilst poverty levels jumped to 33% of the population (up from 15% in 1999) and

[73] Dornbusch (1995: 226) called the reforms Argentina implemented in the 1990s the 'Menem-Cavallo Miracle'. Commenting on privatisation, deregulation, trade liberalisation, fiscal and institutional reforms, inflationary control, and the attraction of foreign investment, the authors summarised the development strategy in the following way: 'All of this is splendid. If kept up and pushed further, year after year, the reform program cannot fail to give Argentina the same stability that Chile or Mexico have secured from a decade of adjustment' (Dornbusch 1995: 228).

inequality reached the highest recorded level, a Gini of 0.538.[74] The period from 2003 until 2015 would see the Peronist PJ return to power, first with Néstor Kirchner (2003-2007) and then his wife Cristina Fernández de Kirchner (2007-2015). As the country drew up a heterodox economic programme, structured around an undervalued real exchange rate but also including income-supporting policies financed through the taxation of commodity exports, advocates of neodevelopmentalism proclaimed the country was 'the hope of Latin America' (Bresser-Pereira 2007). Positive results until the turn of the century showed there had indeed been reasons for optimism, but, with growth and redistribution stagnating from 2012 onwards (see below), there is not much doubt another plan had bitten the dust much before Cristina Kirchner left power in December 2015.

In light of Argentina's strong economic performance between 2003 and 2011, explaining the factors that drove this boom and the processes that led to its dismantling from 2012 onwards can offer an important contribution to the study of development strategies. In 2011, nine years after the deepest point of the 1999-2002 crisis, GDP per capita was 58% higher than in 2002, the stock of foreign reserves had more than quadrupled (from US$ 11 billion to US$ 46 billion), poverty had fallen from 33 to 4% of the population, and the Gini index had decreased from 0.538 to 0.423.[75] With a fast recovery from the global crisis of 2008, it seemed like the government's strategy was working. And this strategy was heterodox: an employer-of-last-resort scheme was introduced in 2002 (Neffa 2009), the government took a more active role in mediating capital and labour relations (Bonnet and Piva 2012), taxes on exports of primary goods increased (Lapegna 2017), and the real exchange rate was considerably depreciated (Frenkel and Rapetti 2008). For all that, somewhere along the line things went awry. GDP per capita fell every year from 2012 until 2015, the country bled half of its foreign reserves, inequality stagnated, yearly inflation reached about 30% (according to the price index of Pricestat) and no policy seemed to work beyond a couple of months.

This chapter casts a first look at the pattern of accumulation that prevailed between 2003 and 2015, seeking to identify its key elements in order to explain how it delivered growth and redistribution for a while, and why it later broke down. It is argued throughout the chapter that the development strategy was incapable of overcoming the economy's constraints, but only displaced them temporarily, as from the first moments of the 2003-2011 boom the characteristics of growth and redistribution inherently pressured the balance-of-payments

[74] GDP per capita in constant local currency units, poverty defined as the headcount living under US$ 4.00 per day (2011 PPP conversion factors), and the Gini coefficient refers to per capita household income inequality based on data from household surveys. All data taken from the World Bank (poverty and inequality from the PovcalNet platform).

[75] Poverty, inequality and GDP per capita data from the World Bank. Data for the stock of foreign reserves from the IMF.

and raised inflation. At the heart of these limitations was the incapacity of upgrading the country's productive structure and its insertion into the world market. The policy frameworks that were in place throughout the period, including different exchange-rate regimes, controls on foreign currency, price freezes, the taxation of commodity exports, and incentives to investment and exports, were ultimately only capable of managing the economy's slow regressive structural change. In light of this, the very success of growth and redistribution between 2003 and 2011 created mounting fragilities the development strategy could not overcome, leading into the stagnation of the 2012-2015 period.

This chapter is organised as follows. Sections 5.2 and 5.3 discuss growth and structural change, arguing that two different drivers of demand coexisted during the 2003-2011 period: a one-off shift towards exports, due to the 1999-2002 crisis and the sharp devaluation of the currency, and a continuous stoking of the demand for wage-goods and services, through income-supporting policies (MW hikes, CCTs, and non-contributory pensions) and endogenous market mechanisms. Domestic drivers of demand eventually became dominant, leading to an overall cumulative-causation process of growth, redistribution and regressive structural change. This piece of the argument feeds into a deeper analysis of the economy's changing constraints, in sections 5.4 and 5.5. Section 5.4 shows how, even during the devalued currency period of 2003-2008, the technological intensity of the country's export bill did not improve substantially, and the dynamics of the trade-balance, from the very beginning of the period, pointed to an eventual deficit. There was thus no dynamic improvement of the country's insertion into the world market, but rather an erosion of the level-effects to competitiveness that had been created by low wages and the currency devaluation in 2003. Section 5.5 then discusses the control of inflation, and shows that the country was not able during any period to secure real wage gains, stable inflation and a devalued exchange rate. The different policy regimes that were entertained proved costly and ineffective, and eventually led into the 2012-2015 stagnation. Section 5.6 concludes, highlighting that a broader set of policies was necessary to transform the pattern of accumulation's constraints.

5.2. Export- and domestic-led growth: Argentina's 2003-2011 economic boom

After an intense crisis between 1999 and 2002, Argentina maintained some of the world's fastest growth rates from 2003 until 2011, before declining from 2012 until the end of Cristina Kirchner's government in 2015.[76] During the nine years from 2003 until 2011,

[76] At the time of writing (June 2018), the country has not yet fully emerged from this low-growth scenario and inequality is on the rise (Niedzwiecki and Pribble 2018). The analysis is restricted, however, to the end

real GDP grew by a total of 73.9%, which was twice the average of countries in Latin America and the Caribbean, although still far from Chinese (152.6%) or Indian (102.2%) levels.[77] The 1999-2002 crisis that preceded this period saw real GDP fall at an average yearly rate of 4.9%, whilst the four years from 2012 until 2015 were marked by stagnation, with an average growth rate of 0.4% per year. Sandwiched as it was between the preceding crisis and subsequent stagnation, the 2003-2011 growth period must be understood in relation to these two framing episodes. Which is to say, the matter at hand is not only to explain what drove and sustained growth during this successful phase, but also to identify whether and to which extent the 1999-2002 crisis was an enabling factor, and the 2012-2015 stagnation a result, of the pattern of accumulation between 2003 and 2011.

On the one hand, there are authors who understand that policy *decisions*, particularly the different approaches taken regarding the management of the exchange rate and fiscal policy, explain both the growth phase of 2003-2011 and its subsequent reversal (e.g. Bresser-Pereira 2013a, Damill *et al.* 2011, Damill *et al.* 2015, Frenkel and Rapetti 2008). On the other hand, there are those who highlight that the 1999-2002 crisis altered the country's foreign competitiveness and capital-labour relations, which created the possibility of the 2003-2011 expansion (e.g. Bonnet 2016, Felder 2015, Féliz 2015, Grigera 2012). According to this line of thought, the decline of growth after 2011 was due to the reversal of high international commodity prices, on which the economy continued to depend, and to the incapacity of the government in containing distributive conflicts, which led to escalating inflation.

The first interpretation outlined above structures its reading around the management of the exchange rate, considering that the key policy goal of any emerging economy is to keep a stable and devalued exchange rate (Bresser-Pereira 2012b, 2012c, Damill and Frenkel 2014, Damill *et al.* 2015, Frenkel and Rapetti 2008).[78] It would be a trite statement that the level of the real exchange rate influences the level of an economy's external competitiveness, so the crucial element of this interpretation lies in the dynamic view it proposes: stripped down to its very core, the claim is that keeping the real exchange rate at a low *level* leads to *dynamically* displacing the balance-of-payments constraint, with real income gains and redistribution following in time.[79] The claim is that by keeping a stable

of 2015, when Mauricio Macri substituted Cristina Kirchner at the presidency.

[77] GDP in constant local currency units; data provided by the World Bank. Latin America and the Caribbean is the regional division of the World Bank, with data for 35 countries during this period.

[78] For these authors, the management of the exchange rate has to be integrated in a broader policy mix, particularly as regards keeping a balanced fiscal budget, but also encompassing measures to control inflation, targeted social policies and some instances of industrial policy (Rapetti 2013). These are, however, flanking measures to support the overriding goal of keeping a devalued exchange rate.

[79] This paragraph summarises arguments present in, amongst others, Boggio and Barbieri (2017), Bresser-Pereira (2008), Habib *et al.* (2017), Missio *et al.* (2017), Oreiro *et al.* (2015) and Rapetti (2013).

and devalued exchange rate, manufacturing exports and the profits of the firms responsible for them will increase, unleashing investment and hence growth and employment in these sectors. Through a combination of learning by doing, increasing returns to scale, relaxed financing constraints and research and development initiatives, productivity would rise in these export-orientated activities. In time, this would allow for real wage gains and lower inequality by increasing the employment-share of technology-intensive sectors.

According to this neodevelopmentalist, export-orientated interpretation, the changing growth rates of Argentina from 2003 until 2015 were essentially the result of the *decision* to change the macroeconomic framework. The mechanism was clear, for these authors: 'we claim that the shift from high growth to stagflation was due to a change in the approach to macroeconomic policy: from one aiming to preserve a stable and competitive real exchange rate and twin surpluses, to another one of populist orientation' (Damill *et al.* 2015: 1). Bresser-Pereira has a similar argument, as he states that 'The Argentinean case shows how a developmentalism that started off competently can slide into fiscal and exchange-rate populism ("fiscal" if the state spends irresponsibly, "exchange-rate" if the whole country does so)' (Bresser-Pereira 2013a).

The second framework outlined above, in turn, takes an approach to the 2003-2011 growth period that highlights the latter's connections with the preceding decade and points to fragilities that establish a link with the subsequent stagnation of 2012-2015 (Bonnet 2016, Felder 2015, Féliz 2015, Grigera 2012). According to this reading, the 2003-2011 boom had three sets of enabling conditions. They respectively comprise a productive restructuring of the economy during the 1990s, which bankrupted marginal firms and raised the productivity of the remaining ones; a decrease of real wages and the devaluation of the real exchange rate during the 1999-2002 crisis; and the high prices of Argentinean agricultural exports during the 2000s. These three factors together increased the profitability of export-orientated firms, making exports the main driver of growth during the 2003-2011 period (aided by government consumption and income-supporting policies).

The 2003-2011 period had two key fragilities, according to this second interpretation. The first was the dependency of growth and of balance-of-payments solvency on high commodity prices, in light of the economy's slow productivity gains which gradually eroded foreign competitiveness as wages grew (Felder 2015, Féliz 2015, 2016b). The second constraint was the incapacity of the government to discipline the distributive conflict. This manifested itself through rising inflation, based on rapid adjustments of wages and prices, combined to costly but ineffective attempts to manage this process via subsidies and the control of administered prices (Bonnet 2016, Bonnet and Piva 2012, Piva 2015a, 2015b).

The analysis conducted in this chapter finds the second framework holds more traction, although the mediations it proposes between the growth period of 2003-2011 and its subsequent downturn need to be further developed. In order to do so, this chapter examines in more detail the nature of the 2003-2011 growth process, its reliance of conditions created by the 1999-2002 crisis, its policy framework, and how it gradually drove a structural change towards low-productivity, services sectors.

As shown in Table 5.1 (see also Table A4.1),[80] the 1999-2002 crisis dealt a major blow to the Argentinean economy, shifting the level of key prices and moulding their subsequent behaviour. With output falling at a yearly rate of 4.9% between 1999 and 2002, average wages also fell, in real terms, by a total of approximately 23%.[81] Unemployment reached a peak of 19.6% in 2002 (ILO), as poverty levels skyrocketed to 33% of the population and the profit-share of income rose from 43%, in 1999, to 52%, in 2002.[82] The country lost foreign reserves to the tune of 17 billion dollars, with current account deficits averaging 2.9% of GDP per year (data from INDEC).

Under these conditions, the situation quickly unfolded into a general social crisis, with mass street protests taking to direct action and growing extra-institutional mobilisation (Bonnet 2006, Dinerstein 2001, 2002, Grigera 2006). A popular insurrection rejected the prevailing political forms, demanding to 'oust them all' *('¡Que se vayan todos!'*, a repeatedly shouted motto in the street protests). Four presidents were removed in a fortnight before Eduardo Duhalde assumed a provisional government on 2 January 2002 and Néstor Kirchner finally assumed office through regular elections on 25 May 2003, under the banner of returning Argentina to a 'normal and serious country'. This social, economic and political crisis led to major changes in the country's policy framework (for an analysis of changes to the state form and the distribution of policy-making powers, see Bonnet and Piva 2012).

[80] In order to study growth and sectoral changes in the Argentinean economy during the 2000s, it is necessary to combine a series of sources and make estimations based on them. GDP and its division into institutional sectors (private consumption, government consumption, investment, exports and imports) is not problematic, but further work is needed to make different sectoral national accounts compatible. All the procedures adopted in this chapter are explained in Appendix 5.

[81] Data from National Accounts: total yearly wage mass divided by the number of occupations, deflated by the implicit GDP deflator. Average hourly wages deflated by the official CPI, drawn from household surveys, suggest a decrease of about 26% (employment data compiled by SEDLAC).

[82] Profit-share data from the National Accounts, excluding mixed income. Poverty defined as the headcount living under US$ 4.00 per day (2011 PPP conversion factors), data from the World Bank (PovcalNet platform).

Table 5.1 Average current account, real effective exchange rate index, inflation rate, primary fiscal surplus, terms-of-trade index and GDP growth rate for Argentina for selected sub-periods, 1999-2015

Period	Current account (% of GDP)	Real effective exchange rate index (2003 = 100)	Inflation (average year-over-year rate)	Primary fiscal result (% of GDP)	Terms of trade (2003 = 100)	Real GDP growth (annual average %)
1999-2002	-2.9 (1999-2001) 8.7 (2002)	47.1 (1999-2001) 108.5 (2002)	-1.1 (1999-2001) 25.9 (2002)	0.9	89.9	-4.9
2003-2011	2.0	96.4	16.1	2.4	119.4	6.4
2012-2015	-1.7	63.9	28.1	-1.4	143.8	0.4

Notes: The real effective exchange rate is the broad effective exchange rate the BIS provides, which weights nominal bilateral exchange rates by trade flows between 61 countries and deflates them by corresponding price indices. The version used throughout this thesis substitutes the deflator used for the Argentinean economy for the Pricestat deflator, which corrects for the post-2007 unreliability of the official Consumer Price Index. The real exchange rate is defined in terms of local currency units per foreign currency (a decrease means an appreciation of the domestic currency). The terms of trade are defined as the price of exports divided by the price of imports (a decrease means imports become dearer relative to exports). Primary fiscal result of the National Public Sector; these values differ slightly from the consolidated public-sector primary surplus data available from the Savings-Investment-Funding Account data provided by the Ministry of Finance, but the trends are the same.

Source: Prepared by the author based on data from INDEC (current account, GDP, terms of trade), BIS (exchange rate), Pricestat (inflation), and Finance Ministry (primary fiscal result).

In the depth of the crisis, two key decisions were made which would alter the prevailing macroeconomic framework: a moratorium on foreign debt was declared in December 2001 and, in January 2002, the exchange rate was allowed to float. The nominal exchange rate went from 1:1, in January 2002, to 3.67, in June 2002 (in Argentinean pesos per US dollars). This ended the so-called 'convertibility' regime, which had been in place since April 1991. This regime pegged the Argentinean peso to the dollar at an overvalued exchange rate (in nominal terms, 1:1), granted autonomy to the Central Bank, determined that the latter must back the monetary base in foreign reserves within straight margins, and allowed for foreign-currency-denominated contracts in the domestic economy (Damill *et al.* 2002). This had essentially converted the Central Bank into a currency board, divesting the state from most monetary policy instruments.

The end of the convertibility regime in 2002, as Bonnet and Piva (Bonnet 2016, Bonnet and Piva 2012) argue, had far-reaching consequences for capital-labour relations and for the state's capacity of influencing the distribution of income and aggregate demand. Under the fixed nominal exchange rate of the convertibility regime, international prices of tradable goods were transmitted to the domestic economy almost directly. To a large extent, firms in tradable sectors had lost the capacity of using the price mechanism in distributive conflicts, and nominal wage adjustments above productivity gains could only

be accommodated at the expense of profit margins. This scenario was changed with the floating exchange-rate regime, which gave the government greater policy autonomy and altered the terms of the distributive conflict, allowing for more leeway to influence profits and labour income through price adjustments and variations of the exchange rate (Bonnet 2006, Féliz 2007).

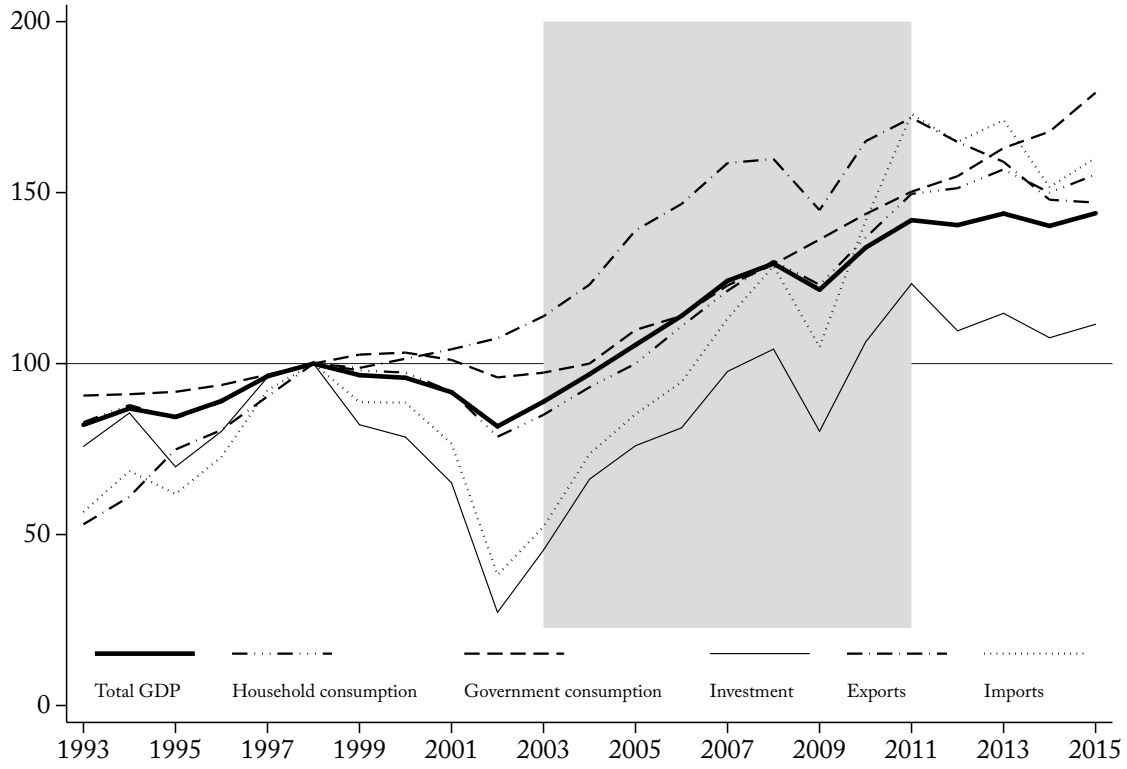
Another key change that was implemented in the midst of the crisis was the taxation of exports, which had been essentially removed during the 1990s (Fairfield 2011, Newell 2009, Richardson 2009).[83] In the beginning of 2002, export taxes between 5 and 20% were introduced on several goods (these rates would vary over the course of the Kirchner governments), with a particular relevance for soybeans and their sub-products. With this, export duties rose from a negligible amount of total taxation in February 2002 to around 10% of total tax receipts by the December 2002.[84] Between 2003 and 2011, export duties fluctuated between 8.5 and 12.3% of total taxation (between 1.8 and 2.9% of GDP), with a maximum real value of $ 15.8 billion in 2008 (in constant 2003 pesos, deflated by the implicit GDP deflator). This increase of taxation, alongside the decrease of state expenditures represented by the moratorium on foreign debt, increased the government's policy space. At the same time, the moratorium on foreign debt meant Argentina became excluded from international capital markets for most of the following decades. As a result, keeping a positive current account and a stock of foreign reserves became particularly important conditions to avoid balance-of-payments crises.

The 1999-2002 crisis thus laid the basis for the following boom in two main ways: by altering key economic prices, and by changing the policy framework. Through the devaluation of the real exchange rate and of dollar (and real) wages, the profitability and foreign competitiveness of domestic firms was greatly improved, relaxing the balance-of-payments constraint. The government also increased its policy space by removing the restrictive convertibility regime, raising export taxes and defaulting on foreign debt. As shown below, the shift of macroeconomic prices allowed for exports to drive growth during the initial years of the boom, whilst the more flexible policy regime allowed for an active use of fiscal and income-supporting policies.

[83] The taxation of commodity exports was a feature of Argentina's political economy that it shared with most Latin American countries during the commodity boom. Gudynas (2012), through his notion of the 'compensatory state', and Svampa (2013), through her notion of the 'commodities consensus', give it central importance in explaining the advances and limits of Pink Tide governments (see chapter 1).

[84] Data from the Ministry of Finance, export duties minus tax refunds on inputs used in exporting activities (*reintegros*) (Ministerio de la Hacienda 2018).

Figure 5.1 Index of real GDP components in Argentina, 1993-2015 (1998 = 100)



Notes: Investment includes stocks variations and errors. Shaded area highlights high-growth period.
Source: Prepared by the author based on data from INDEC.

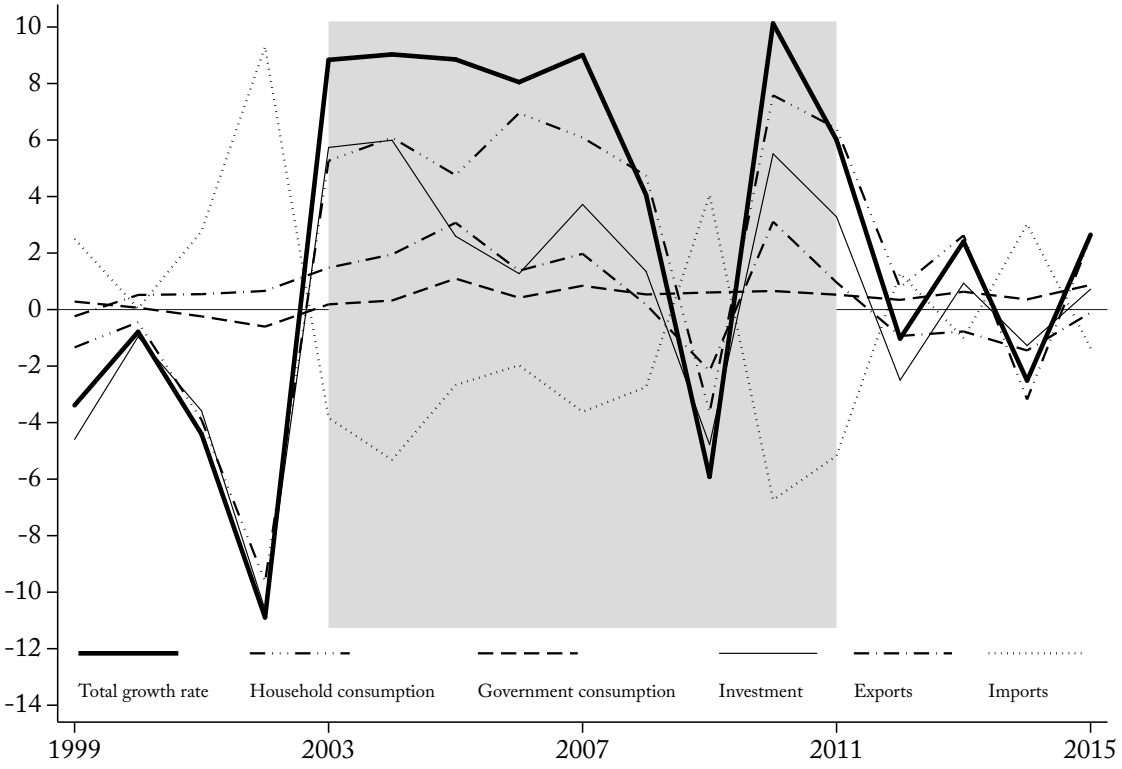
The 2003-2011 boom was thus launched under this more flexible policy framework, with a higher foreign competitiveness of domestic firms, and when all domestic sources of demand and imports had reached their nadir (see Figure 5.1). Besides the already-mentioned high growth rates and the positive results in terms of income redistribution, the 2003-2011 period was also marked by twin surpluses: the current account was positive until 2009, on average representing 2.0% of GDP over the whole period, whereas the primary fiscal surplus stood on average at 2.4% of GDP (see Table 5.1 and Table A4.1).

Table 5.2 Average annual contribution of different sources of demand to the growth rate of GDP in Argentina, 1999-2015

Period	Household consumption (% of total)	Government consumption (% of total)	Investment (% of total)	Exports (% of total)	Imports (% of total)	**Total GDP growth rate (% of total)**
1999-2002	-3.8 (78.6)	-0.1 (2.5)	-4.9 (101.5)	0.4 (-7.6)	3.7 (-75.0)	**-4.9** (100)
2003-2011	4.9 (76.2)	0.6 (8.9)	2.7 (42.5)	1.3 (20.6)	-3.1 (-48.2)	**6.4** (100)
2012-2015	0.7 (182.2)	0.6 (145.9)	-0.5 (-139.8)	-0.8 (-215.9)	0.5 (127.5)	**0.4** **(100)**

Notes: Investment includes stocks variations and errors. Imports present a positive contribution when their value decrease over the reference years.
Source: Prepared by the author based on data from INDEC.

Figure 5.2 Absolute contribution of different sources of demand and of imports to the growth rate of GDP in Argentina, 1999-2015



Notes: Investment includes stocks variations and errors. Imports present a positive contribution during certain years when their value decrease. Shaded area highlights high-growth period.

Source: Prepared by the author based on data from INDEC.

As shown in Table 5.2 and Figure 5.2, the contribution of export demand was substantial throughout the 2003-2011 period, adding on average 1.3 points to GDP growth, or 20.6% of the total, driven by three factors (this is explored in more detail in section 5.4). The first and most important was the international price for the country's exports, which increased by 117% from 2003 until 2011.[85] International prices were of considerable importance to kick-start growth in 2003, with a rise of 11%. The second was the depreciation of the currency, whose value between 2003 and 2011 was about half that of the preceding decade (see Table 5.1), and which increased the impact on the domestic economy of the same value of exports in dollars. Finally, increasing volumes also played a role, enabled by the higher competitiveness of domestic firms. This volume-effect was, however, much less important than the currency devaluation or international prices: exported quantities increased by 27% from 2003 until 2011.

Although exports contributed less to growth than household consumption or investment, four factors set them apart from these two other sources. First, exports had not declined in the preceding period, so their increase started from a much higher level than other sources of demand. In fact, taking 1998 as the base year, exports outgrew any other source

[85] Exports price and volume indices from INDEC.

until 2011 (Figure 5.1). Second, their obvious role of securing foreign currency stimulated growth in a further way, by alleviating the balance-of-payments constraint. Third, they were relevant in kick-starting the upswing, providing a much-needed demand channel in 2002 and 2003, when other sources were unavailable. Fourth, the increased taxation of exports financed government consumption and other income-supporting policies, which added further stimuli to growth.[86] Because of these four reasons, the overall impact on growth of the export-driver of demand was likely higher than suggested by its direct contribution of 20.6%. Nevertheless, the fact remains that export demand was one of the factors behind the recovery and subsequent boom, but it was far from the only one. After the initial years, exports played more of a supporting role, the key drivers being related to the dynamics of household consumption and investment.

Household consumption was the main driver of GDP growth during the boom, contributing on average with 4.9 pp between 2003 and 2011 (76.2% of the total). This expansion was clearly a recovery from the crisis at least until 2005, when consumption reached the same real value it had in 1998 (Figure 5.1). In order for this initial recovery to happen, however, autonomous drivers – and later endogenous market responses – were needed. The role of exports has already been mentioned, which would eventually have multiplier effects through higher household income and hence consumption. More important, however, were two key policy decisions: a programme that mixed elements from CCT and employer-of-last-resort schemes, known as PJyJHD, and rising MWs.[87] As argued later in the chapter, the overall dynamics of the pattern of accumulation, which led to rising average wages and employment, were further key drivers of household consumption.

Contrary to the convertibility period of the 1990s, when the MW was stagnant at $ 200 (per month), raising it became a key policy instrument of the 2000s. It was increased to $ 300 in 2003, amounting to a 32% hike in real terms (but still massively lower than in 2002 in dollar terms), and thereafter saw nominal increases every year until 2015. In real terms, however, the MW would reach its maximum in 2007, at three times the value it had in 2002, later displaying an oscillating, but downwards-pointing trajectory. Therefore, the MW was quickly raised much above its value in the preceding decade and then maintained at that level for the remaining of the 2003-2011 period. Raising the MW benefitted primarily low-income households, given the concentration of its recipients in

[86] It should be pointed out, however, that there was no direct link between export taxation and specific government expenditures, and with the ample idle capacity of the beginning of the 2000s an expansionary fiscal policy could hardly have had negative impacts. Nevertheless, as the economy grew and unemployment declined, export taxation began to function as a more standard form of redistribution.

[87] The role of these policies in reducing inequality is detailed in chapter 6.

the bottom-half of the distribution – the MW equalled between 0.30 and 0.53 of the average wage between 2003 and 2012 (Maurizio and Vázquez 2016: 110).

The second policy which drove household consumption demand was the PJyJHD, introduced in January 2002 (for details of the plan, see Neffa 2009). Amidst rising unemployment and destitution, the government introduced a set of emergency measures to alleviate poverty, of which the PJyJHD was the central element. It was initially implemented as a short-term measure, and renewed each year until 2009 when the CCT programme *Asignación Universal por Hijo* (Universal Benefit per Child, AUH) replaced it. PJyJHD offered a cash transfer of $ 200 per month to its beneficiaries, with eligibility restricted to unemployed heads-of-household who were permanent residents of the country *and* had in the households either i) children under 18-years old, ii) a pregnant member, or iii) disabled children regardless of their age.

Besides these eligibility criteria just indicated, the programme had conditionalities of two sorts. On the one hand, beneficiaries had to prove their children were regularly attending school and going to medical check-ups. On the other hand, and this is what gives PJyJHD traits of an employer-of-last-resort programme, they also had to work between four and six hours in an occupation the local council designated (usually, this was doing some sort of community work or participating in the construction of public infrastructure). Finally, it was also compulsory for beneficiaries to seek re-entry into the private labour market by registering for vocational training, applying for work with the help of the local councils and so on.

PJyJHD reached approximately 2,000,000 individuals at its peak, in 2003 (Neffa 2009), which corresponded to around 15% of households (based on calculations with data from the EPH surveys). It was the largest income-support programme of Argentina at the time (excluding the pension system), with total disbursements of about $ 3.0 billion in 2003 and $ 3.4 billion in 2004.[88] These values implied a transfer of income between 0.7 and 0.8% of GDP to some of the most destitute households in the country, as 90% of recipients were under the official poverty line in 2002 (Galasso and Ravallion 2004), and led to an estimated decrease of 0.026 in the Gini coefficient of household per capita income (Gertel *et al.* 2008). After 2003, the programme was gradually phased out, with nominal (and real) disbursements decreasing every year – by 2007 its benefits represented about 0.2% of GDP. Nevertheless, it was a central element in raising household income and expenditures through direct and knock-on effects during the beginning of the 2003-

[88] Expenditure by social policy data from the Ministry of Finance.

2011 boom (for analyses of the political impacts of PJyJHD and its role in stabilising the 1999-2002 crisis, see Castorina 2013, Golbert 2004).[89]

The second important CCT scheme introduced in the 2000s was AUH (see Gasparini and Cruces 2010, Judzik *et al.* 2017, Lustig and Pessino 2014). It was introduced in October 2009, and provided a monthly benefit per child for low-income households (the original value was of $ 180 per child, but this has since then been readjusted), conditional on school-attendance and vaccination of the children. In 2011, it reached about 15% of all households in the country, transferring resources to the tune of 0.8% of GDP (Garganta and Gasparini 2015). Given the targeted nature of AUH and PJyJHD transfers to low-income households, as well as a similar volume of transferred resources (when compared to the first years of PJyJHD), these two income-supporting programmes are expected to have had a comparable macroeconomic impact over the 2003-2011 period.

Regarding government consumption, as a final source of demand it was not a large element of the 2003-2011 boom, with an average contribution to GDP growth of 0.6 pp (8.9% of the total). There are nuances to this small role of government consumption, however, with different results regarding the overall impact of the public sector. The government maintained a primary fiscal surplus of around 3.0% of GDP from 2003 until 2008, but did so whilst raising expenditures and taxation, which provided a positive fiscal impulse. In this vein, the consolidated public sector increased its revenues from 27.7% of GDP, in 2003, to 30.1%, in 2008, whilst current expenditures rose from 24.5 to 26.4% of GDP over the same period.[90] Moreover, during these same years government capital expenditures increased from 1.8 to 3.8% of GDP, with positive implications for the economy's growth trajectory (see Amico 2013).

This balanced increase of government expenditures and investment, whilst maintaining a primary surplus, was an additional source of demand that had a contribution to growth beyond what is represented by government consumption alone.[91] Furthermore, between 2009 and 2011 the government move into a clearly expansionary fiscal policy, as current expenditures rose by 4.8% of GDP whilst revenues increased by 2.1% of GDP. In light of this, the fiscal role of the government during the 2003-2011 boom period was

[89] Tcherneva and Wray (2005) mention that PJyJHD transfers were estimated to have an income-multiplier of 2.57, which would have led to an additional 2.5 pp of GDP growth in 2003, but the details of the calculation could not be verified. In any case, given the high unemployment of the period and the concentration of beneficiaries amongst the poorest, it seems fair to assume that the multiplier would be high.

[90] Total current revenues and current expenditures, from the Savings-Investment-Funding account data provided by the Ministry of Finance.

[91] This was not precisely a balanced-budget increase, as analysed by Haavelmo (1945), because the government maintained a primary surplus. As this surplus was kept stable, however, the simultaneous increase of taxation and expenditures still provided a fiscal impulse, i.e. the changes to the government's fiscal position were expansionary, regardless of its level.

twofold: it redirected resources to lower-income households via taxation and transfers, boosting effective demand, and it provided a further impulse through raising taxation and expenditures simultaneously.

Finally, investment was a strong driver of demand, contributing on average with 2.7 points of growth per year between 2003 and 2011 (42.5% of the total), but a deeper look suggests more nuanced dynamics. First, as seen in Figure 5.1, investment had declined precipitously between 1998 and 2002: in real terms, it had dropped 72.8% over these four years, and represented a staggeringly low 8.6% of total GDP in 2002. The *growth* of investment during the 2003-2011 period thus started from a very *low floor*, which lead to less impressive investment *levels* during the boom. In fact, *between 2003 and 2011 the real value of investment was on average 13.3% lower than it had been in 1998, and it only surpassed the 1998-level in three years* (2008, 2010 and 2011). Second, *between 2003 and 2011 the share of investment in GDP was on average 17.9%, substantially below the 19.9% average that was maintained between 1993 and 1998*.[92]

Part of this decrease in investment rates and levels was arguably related to the sectoral shifts of the economy, which, as shown in the next section, gravitated towards labour-intensive services (such as construction and trade). It has also been argued that greater capital concentration and foreign ownership help explain low investment during the 2000s, as large or foreign-owned companies have shown lower investment rates in line with their global strategies (Azpiazu and Manzanelli 2011b, Azpiazu *et al.* 2011, Manzanelli 2015). Regardless of their precise causes, the volatility and the low levels of investment during the Kirchner governments suggest this source of demand was unable to support sustained accumulation, even if it could drive GDP growth for a few years (see also Féliz 2015, Gezmiş 2018).

Having reviewed the dynamics of the sources of demand separately, an interpretation of their relationship can now be offered. In 2003, the currency devaluation and rising prices of exported goods provided an initial impulse to growth via greater export revenues in domestic currency. Taxing these same exports and declaring a moratorium on foreign debt, the government transferred income to unemployed households via PJyJHD, and also increased the wages of low-paid workers by raising the real value of the MW. Exports and household consumption thus provided a first stimulus to effective demand, drawing in investment and initiating the growth cycle in earnest.

[92] Data from national accounts, measured in current prices.

As growth picked up in 2003, it was rapidly translated into rising employment, with about 668,000 net posts created in 2003 and a similar number over the next years.[93] Rising employment increased the wage mass, and soon led to further positive results in the labour market: the share of registered employees rose from 42.5% in 2003 to 48.0% in 2007, and average wages increased by 29.0% from 2004 until 2007. Wage and income gains were, furthermore, concentrated in the bottom of the distribution, as inequality began a steady decline driven by labour formalisation (Maurizio 2014), rising MWs (Maurizio and Vázquez 2016), government transfers (Lustig *et al.* 2013) and lower skills premia (Galiani *et al.* 2017). These initial drivers – rising MWs, government transfers, and export demand – hence caused a series of knock-on effects that spurred growth, heated up the labour market and raised household income, further increasing demand and thus reinitiating the process.

In spite of the positive record of the 2003-2011 period, with fast growth, income redistribution and twin surpluses, there were key fragilities present from its beginning. The current account, although it remained in surplus until 2009 (see Table A4.1), was driven to a large extent by the international price of commodities, whilst imports grew much faster than exports even during the devalued-currency period of 2003-2008 (see Table A4.3). As explored in section 5.4, this indicates the country did not improve its insertion into the global market, in light of which the balance-of-payments constraint to growth was tightening. The other key constraint was rising inflation. After a low point of 2.3% (year-over-year) in February 2004, inflation rose every year until 2008, when it reached 24.1% (according to the price index of Pricestat). As discussed in section 5.5, this was an inherent result of simultaneously attempting to maintain a devalued currency and rising real wages without rapid productivity gains and strong countervailing measures, which led to an escalating distributive conflict.

The balance-of-payments and the inflation constraints were thus present from the very first years of the 2003-2011 growth and redistribution process. In order to establish how these constraints were tightened, and hence help explain the stagnation of 2012-2015, it is first necessary to look at the sectoral dimension of the economy, which is done in the next section.

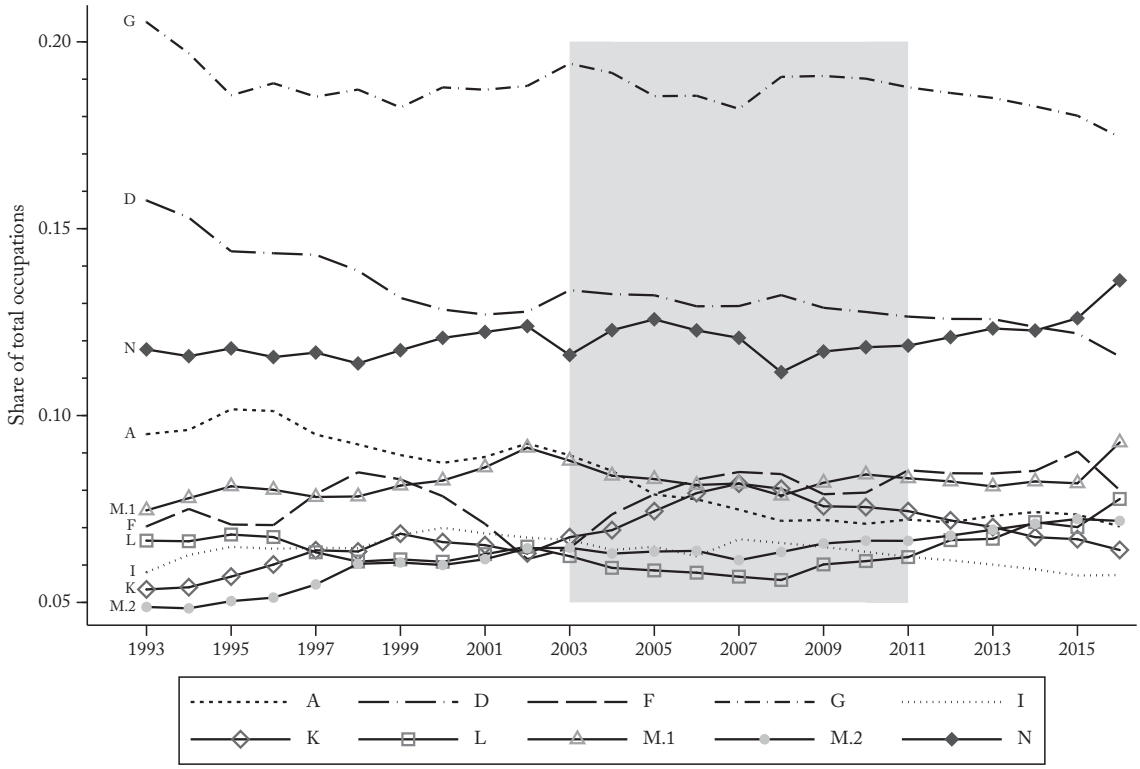
5.3. Sliding into regressive structural change

This section shows that there was a process of structural change underway in Argentina between 2003 and 2011, which was part and parcel not only of the growth and redistribution

[93] Employment, wage mass, average wages (wage mass divided by number of occupations, deflated by the implicit GDP deflator), and share of registered employees from National Accounts.

dynamics of the period, but also a key aspect of its constraints. First, the overall pattern of structural change is investigated, and it is shown that the leading sectors in employment creation had below-average productivity, wages, and capital-intensity. Crucially, even during the devalued-exchange-rate period of 2003-2008, there was no evidence of a growing share of high-productivity, high-wages sectors, indicating that the pattern of accumulation did not activate deeper drivers of growth and redistribution. Then, analysing in more detail the sectors responsible for the largest share of employment-creation, this section highlights the feedback loops between employment, growth and distribution during the 2003-2011.

Figure 5.3 Sectoral distribution of employment in Argentina, 1993-2016 (sectors with more than five percent of total occupations)



Note: Shaded area highlights high-growth period. Sector codes (sectors in italics were not included in the figure): A: Agriculture, animal production, hunting and forestry; *B: Fishing; C: Mining and quarrying*; D: Manufacturing; *E: Electricity, gas and water supply*; F: Construction; G: Wholesale and retail trade; *H: Hotels and restaurants*; I: Transport, storage and communication; *J: Financial intermediation*; K: Real estate, renting and business services; L: Public administration and defence; compulsory social security; M.1: Public education, health and social work; M.2: Private education, health and social work; N: Other community, social and personal service activities; private household with employed persons.

Source: Prepared by the author based on data from INDEC. See Appendix 5 for details.

Figure 5.3 reports the sectoral distribution of employment in Argentina, from 1993 until 2015. The first thing to notice is that the structural change that took place between 1993 and 1998 was of greater weight than the transformations since then. As discussed in section 5.2, during the 1990s the macroeconomic framework in place in Argentina was based on a

highly overvalued exchange rate and the virtual loss of monetary policy autonomy, under the 'convertibility' regime. Furthermore, since the beginning of the 1990s import tariffs and duties had been severely reduced, the capital account of the balance-of-payments had been deregulated, and equal treatment had been granted to capital of all origins (Damill *et al.* 2002). Trade liberalisation was accompanied by the abandonment of industrial policy and the privatisation of SOEs (Azpiazu and Basualdo 2004, Azpiazu and Schorr 2010a), with public assets worth approximately US$ 32 billion sold off between 1989 and 2000 – 60% of which to foreign investors (Medeiros 2009: 120). This policy framework increased unemployment and labour market precariousness (Damill and Frenkel 2006, Damill *et al.* 2003) and improved the position of capital vis-à-vis labour (Féliz 2007), synthesised in an increase of the profit-share of income from 33.7%, in 1993, to 45.5%, in 1998.[94]

The overvalued exchange rate, trade liberalisation and the abandonment of industrial policy in the 1990s produced a shift from manufacturing towards services concomitant to a productive restructuring with profound implications (Azpiazu and Schorr 2010a, Grigera 2012). The employment-share of manufacturing dropped from 15.8 to 13.9% between 1993 and 1998, whilst that of construction, real estate activities, and private health and education rose, respectively, by 1.4, 1.0 and 1.2 pp (Figure 5.3). Meanwhile, labour productivity in manufacturing increased on average by 4% per year from 1993 until 1998, considerably faster than the 2.5% rate observed for the whole economy.[95] The convertibility period thus oversaw both a regressive structural change, in the form of deindustrialisation, and a productive restructuring of the manufacturing sector, whose remaining activities grew in competitiveness.

Riding on these changes between 1993 and 1998, the domestic economy and its insertion into the world market would undergo a further transformation in the 1999-2002 crisis. Manufacturing shed nearly 300,000 jobs between 1999 and 2002 (14.1% of its employment in 1998), furthering deindustrialisation, and the construction sector decreased by 400,000 occupations (32.3% of its employment in 1998). With the currency devaluation and the decrease of wages discussed in section 5.2, the profit-share of income rose by a further 6.4 pp, reaching 51.9% in 2002, and the share in value-added of tradable sectors shot up. Measured in current producer prices, agriculture, mining and manufacturing jointly accounted for 38.2% of value-added in 2002, as compared to 24.5% in 2001 (in constant prices the increase was of 0.4%). Therefore, the convertibility regime and the 1999-2002 crisis transformed the Argentinean economy in ways that benefited capital over labour

[94] Profit-share data from National Accounts, excluding mixed income (in basic prices).

[95] Labour productivity defined as gross added value at constant producer prices per number of occupations.

and, in principle, would support an export-led strategy of development in the following period.

The Kirchners' governments also reinstated some modalities of industrial and export-promoting policies (for broad reviews, see Abeles *et al.* 2017, Couto 2010, Lavarello and Sarabia 2015). A detailed analysis of each programme, its policy tools and resources is impractical, given the large number of different, often short-lived initiatives that were implemented. Considering tariff and non-tariff trade barriers, fiscal subsidies of different natures for export and investment, subsidised credit, the promotion of research and development activities, and sector-orientated policies, Couto (2010: 76) indicates that 83 programmes were active in the 2000s. Lavarello and Sarabia (2015: 55), studying a series of policies including fiscal incentives to companies and subsidies to innovation, indicate that over the 2004-2006 period the annual total transfer of resources corresponded to 4.1% of the value-added of manufacturing (although the policies were not manufacturing-specific), rising to 4.4% over 2007-2009 and then to 7.4% over 2010-2013. Importantly, this shows that industrial policies only picked up in the 2010s, under a more adverse macroeconomic global scenario.[96] The broad characteristics of these policies are analysed below.

Regarding trade policies, besides the already-mentioned taxation of commodity exports, non-tariff barriers were raised and modified throughout the Kirchner governments for the imports of several goods. Textiles, motor vehicles and their parts were amongst the key goods, with the goal of offsetting trade deficits and protecting domestic manufacturing (Gezmiş 2018). Amongst these non-tariff barriers, the use of non-automatic import licenses was particularly important after the 2008 world financial crisis, which afforded a substantial degree of discretionary, if short-lived protection, to sensitive sectors. Complementing this protection of the domestic market, fiscal incentives – such as tax exemptions and early amortisation for investment in fixed capital – were put in place to promote exports.

Cristina Kirchner did attempt to transfer more resources between agriculture and other sectors, but this was still firmly based on price mechanisms, as opposed to being one element of an integrated approach to productive upgrading.[97] A significant attempt to change the

[96] By including subsidised credit instruments – to small and medium enterprises and, after 2012, for investment in capital goods more generally – these values rise from 4.5% over 2004-2006 to 9.8% in 2010-2013 (Lavarello and Sarabia 2015: 55).

[97] Whether – and how – to transfer resources from agriculture to manufacturing is an old dilemma in Argentinean economic debates, synthetically approach by Diamand (1972) in the following terms. The Argentinean agricultural sector has productivity levels that allow it to compete in the world market, whilst manufacturing does not. However, there are dynamic productivity gains to be had by defying current comparative advantages, stimulating over a decades-long period the development and diversification of manufacturing sectors. This will require transferring resources to the latter, as it has a deficit in foreign

country's trade policy was the plan, in March 2008, to increase export taxes on soybeans and other commodities, introducing a variable rate adjusted by the international price of exports (Féliz 2016a, Lapegna 2017). This variable tax was meant as a form of shielding the domestic economy from inflationary pressures of rising international prices (particularly wheat and meat) and as a means of increasing state revenues. In principle, it could also impact the country's trade patterns and productive structure via price mechanisms. The government's plans were, however, bitterly resisted by agrarian capitalists and small and medium rural producers, who launched a four-months agrarian lockout, and by the urban middle-class (Fairfield 2011). As the conflict escalated, the government was unable to enlist the support of manufacturing-sector capitalists – who could, in principle benefit from the tax – and the tax was dropped, with lasting political effects (Bonnet 2010). The government's defeat suggests it misread the alliances it could broker, but also reveals the narrow scope of the policy framework envisaged to influence the economy's productive structure and international trade patterns.

Another key element of policy framework was subsidising investment, particularly through the acquisition of foreign capital and technology-intensive goods. Tariffs on imported goods for large investment programmes were zeroed in 2000, in a policy that was renewed throughout the Kirchner governments, although with the added conditionality of the investment projects using at least 20% of domestic goods (Lavarello and Sarabia 2015). This did not come with any explicit facilities or provisions to transfer technology, however. Although the policy is understandable from the viewpoint of stimulating an investment-led growth model, it led to an 'inverse import-substitution policy' (Castells *et al.* 2014). In fact, the effective subsidy given to importing capital goods had a negative effect on the domestic productive structure by increasing its specialisation in low-technology segments and not deepening the existing productive linkages in the economy (Azpiazu and Manzanelli 2011a), which had already been diminished during the 1990s and the convertibility regime.

Overall, the policies were mostly horizontal and implemented through fiscal incentives (Azpiazu and Schorr 2010b, Castells *et al.* 2014). Sectoral and horizontal fiscal incentives, such as tax exemptions and subsidies to exports, were the largest policy instrument overall, corresponding to between 59.0 and 75.4% of total resources transferred between 2004 and 2013 (Lavarello and Sarabia 2015: 55).[98] In terms of their sectoral selectivity, horizontal policies (including subsidised credit lines for investment) accounted for more than half

trade, through long-term, relatively stable differential trade tariffs or exchange-rate mechanisms. If these are not in place, and if deindustrialisation is to be avoided, the economy will constantly run into balance-of-payments crises, which also act as a deterrent to industrial upgrading as they reduce the levels of capacity utilisation in manufacturing, in turn reducing the sector's scale and hence its productivity.

[98] This excludes subsidised credit, for which detailed data were not presented.

of total resources over the whole period, with regional-focused ones (such as the special tax regime for *Tierra del Fuego*) contributing with about a further third of resources. Moreover, even supposedly vertical policies ended up having a near-horizontal character by virtue of the number of sectors contemplated, a clear example of which can be found in the Strategic Industrial Plan 2020, launched in 2011. This plan was the first attempt to propose a coordinated industrial strategy for Argentina in over three decades, doing so through industrial upgrading, import-substitution and export-promotion (but not the development of new sectors or goods in any substantial way). The plan identified eleven strategic sectors or value-chains, which, according to Lavarello and Sarabia (2015: 81), accounted for no less than 80% of the country's manufacturing sector – which hardly amounts to a targeted vision of structural change.

After 2011, the main change was a greater direct participation of the state through the use of public procurement and investment via SOEs, albeit in a context of slow growth and worsening macroeconomic trends (see section 5.2), as well as growing trade deficits (see section 5.4) and high inflation (see section 5.5). Large state-led projects were launched in the areas of communications technology (particularly satellites), defence (mostly shipbuilding), and energy (via the renationalisation of Yacimientos Petrolíferos Fiscales, YPF), alongside incentives for research and development initiatives (Lavarello and Sarabia 2015). Public procurement also rose, particularly of defence and health goods and services, representing 8% of total resources channelled to domestic manufacturing companies in 2010-2013, up from 3.5% in 204-2006 (Lavarello and Sarabia 2015: 78). These initiatives show a widening of the policy instruments used by the Argentinean government, which, if maintained over the longer term, could potentially help structure more ambitious strategies.

Overall, Argentina's productive-upgrading policies were limited in three ways: they relied too much on horizontal, price-based mechanisms; when they attempted to broaden the policy tools this was done in an adverse economic environment; and they were disarticulated, lacking a coherent vision for change. As shown above, the main policy instruments, particularly during the 2000s, aimed at promoting exports and cheapening investment without sector-specific considerations (or when they did consider sectors, it was in too broad a fashion to qualify as a strategic vision for change). Which is to say, they did not have a clear strategy to upgrade Argentinean firms along global value chains, and nor did they take into account the productive chains already inside the country. Taking into account the subsidy to importing capital goods, this might have even disarticulated, or at least actively forestalled the development of existing productive chains (Castells *et al.* 2014). The policy framework was thus too simplistic to deal with the contemporary

structure of manufacturing, based on the assumption that adjusting macroeconomic prices would be sufficient: in effect, a devalued exchange rate played the role of industrial and trade policy during the 2000s (Azpiazu and Schorr 2010b, Bugna and Porta 2007, Lauxmann and Fernández 2015). In the 2010s the situation is reversed, as experimentations with more policy tools occur in an adverse scenario, which limited their efficacy.

Finally, a key shortcoming of Argentina's matrix of productive-upgrading policies was their incoherent, disarticulated character (Azpiazu and Schorr 2010b, Couto 2010, Lavarello and Sarabia 2015). The myriad initiatives listed above did not establish joint or compatible goals, the vertical policies that existed did not implement conditionalities or assessment routines and, overall, there was insufficient technical and institutional planning capacity in the state (Lavarello, 2015 #1723}. In this vein, Couto (2010: 69) indicates that businesspeople, when asked about the key problems of the state, mentioned the most the lack of coordination between different institutions responsible for industrial policy. Likewise, the substantial turnover of high-level officials, associated to a low institutionalisation of industrial-policy directives, prevented the establishment of long-term goals, instruments and monitoring procedures. The underlying issue is that there was no overarching institution, with the adequate resources, that could elaborate and implement a unified vision of structural change in Argentina.[99] The result were unfocused and inefficacious plans, such as the Strategic Industrial Plan 202 that, as discussed above, considered 80% of manufacturing in Argentina to be of strategic importance. In short, the 2003-2011 boom thus had auspicious structural conditions for a manufacturing-, export-led pattern of development in terms of foreign competitiveness, but a shallow industrial policy framework to support it.

As seen in Figure 5.3, the boost to foreign competitiveness produced by the combined effects of the convertibility period and the 1999-2002 crisis, in absence of a strong industrial policy framework, was insufficient to prevent further deindustrialisation in Argentina during the 2000s. In fact, the shift away from manufacturing and into services was not reverted, but rather deepened over the 2003-2016 period as a whole.[100] Over the course of these 14 years, the employment-share of manufacturing fell by another 1.2 pp,

[99] Once again, Diamand (1972: 46) was prescient in discussing exchange-rate and trade policies: 'In a total vacuum created by the lack of guidance, the management of import-duties is ruled by sectoral pressures and by the ideologies of the officials of the day, often in contradiction to explicit economic-policy goals. The end-result is the worst process of all: an improvised, incoherent and asymmetric exchange-rate management that not only prevents the economy from growing, but also spurs growing inefficiency and ever-larger disequilibria in the productive structure'.

[100] As explained in Appendix 5, employment data between 2008 and 2015 are estimated through several sources, so some noise is bound to be present, whereas a full dataset exists for 2016. Therefore, this paragraph discusses the period ending in 2016, which includes the first year of the Macri administration. Nevertheless, given that the same broad conclusions would apply until 2015, the analysis is qualitatively unchanged by this procedure.

reaching 11.6%, whilst that of private health and education rose from 6.4 to 7.2% and that of other services including domestic labour from 12.4 to 13.6%. Public administration also became a larger sector, going from 6.5 to 7.8% of total employment, in lieu of agriculture, which decreased from 9.3 to 7.0%. Furthermore, the share of manufacturing in value-added decreased almost continuously between 2004 and 2016, tumbling down from 22.3 to 16.4% in current prices and from 22.3 to 20.1% in constant prices.[101] The legacy of the Kirchner administrations as a whole, therefore, was to deepen the regressive structural change that has been ongoing for decades (for the previous decades, see Azpiazu and Schorr 2010a).

Not only did the share of manufacturing decrease from 2003 until 2016, but *the overall direction of the sectoral transformations was towards relatively low-wage, low-productivity, non-capital-intensive activities*, as shown respectively in Figure 5.4, Figure 5.5 and Figure 5.6. The vertical axes of these figures measure average wages, labour productivity, and the share of gross operating surplus (GOS) in value added, in all cases relative to that of the whole economy.[102] On the horizontal axis, the three figures bring net employment creation, and only private sectors are chartered. For all of the variables investigated, a clear relationship emerged: *the sectors that created the most jobs had below-average wages, productivity and capital-intensity*. In other words, the overall result of the 2003-2016 period was to deteriorate the productive structure in its capacity to create high-quality jobs and to drive international competitiveness. This suggests that assuring international cost-competitiveness is not a sufficient condition to drive a structural upgrading of the economy, it also being necessary to have a strong set of industrial policies.

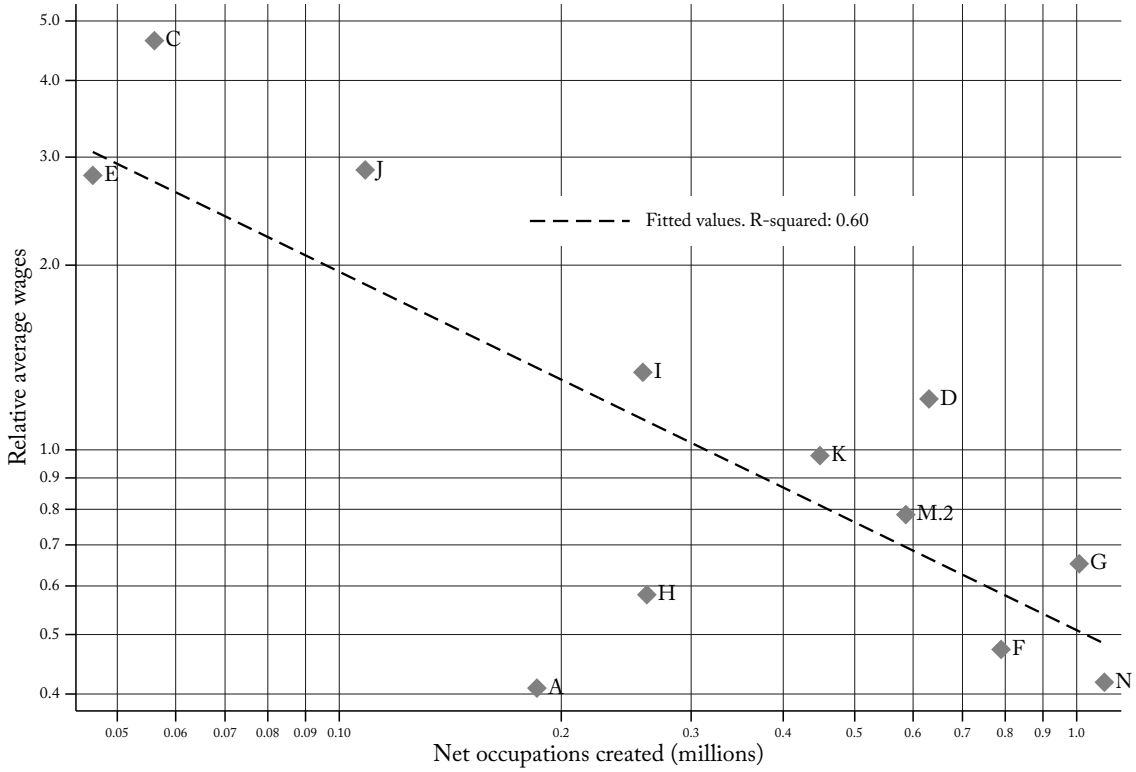
To put the regressive nature of the structural change that happened under the Kirchner governments in perspective, a brief comparison can be established with the import-substitution-industrialisation (ISI) period from the 1920s until the 1960s. Díaz Alejandro (1970: 72-74) shows that, during these decades, 31.0% of net employment creation was in manufacturing, considerably above the second-highest sector (government services, at 17.7%), and that the labour productivity of manufacturing was 30% above the economy-average in the early 1960s. There was, furthermore, an overall positive association between

[101] The 1993-based national accounts indicate that between 2001 and 2003 the manufacturing share of value skyrocketed by about 7 pp in current prices, which is directly related to the currency devaluation, whereas in constant prices it rose by 1 pp. It thereafter remained stable in constant prices and decreased by 2.5 pp in current prices until 2007. The 2004-based national accounts, in turn, indicate that between 2004 and 2016 the manufacturing share of valued added decreased by 2 pp if measured in 2004 prices and by 6 pp if measured in current prices, alongside a decrease of 2 pp in its share of employment. Labour productivity in the sector grew on average by 0.8% per year between 2005 and 2016, similar to the economy-wide rate of 0.6%. Hence, there were both price and quantity dynamics behind the deindustrialisation process, but it is clear that the sector did not lead productivity gains or employment in the economy.

[102] The GOS-share is calculated relative to the whole private sector.

labour productivity and total net employment creation for the nine private sectors discriminated, contrary to what happened under the Kirchners. ISI thus oversaw a progressive structural change, whilst the 2000s oversaw a regressive one.

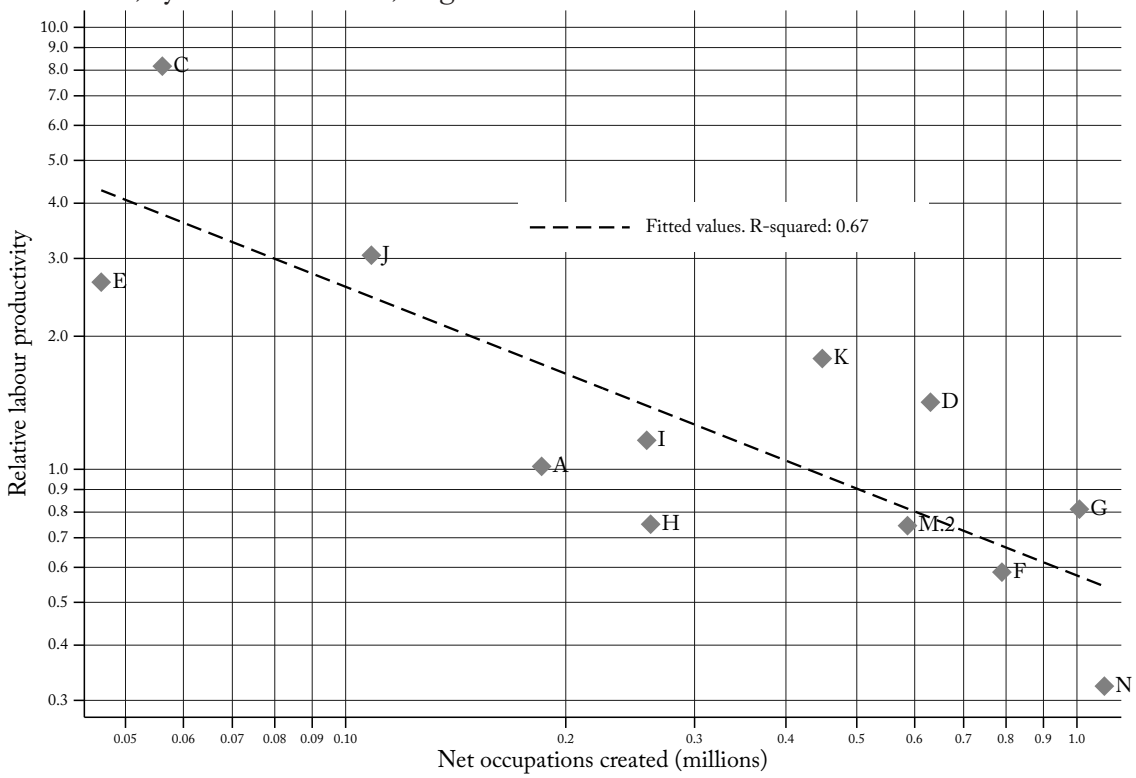
Figure 5.4 Relative average wages in 2016 and net employment creation from 2003 until 2016, by economic sector, Argentina



Notes: Average wages defined as the sector's wage bill (including benefits) divided by the number of occupations, and relative average wages are the sector's average wages divided by those of the whole economy. Public sectors excluded from the figure. Occupations created (horizontal axis) are in absolute numbers.

Source: Prepared by the author based on data from INDEC. See Appendix 6 for details and the notes to Figure 5.3 for sector codes.

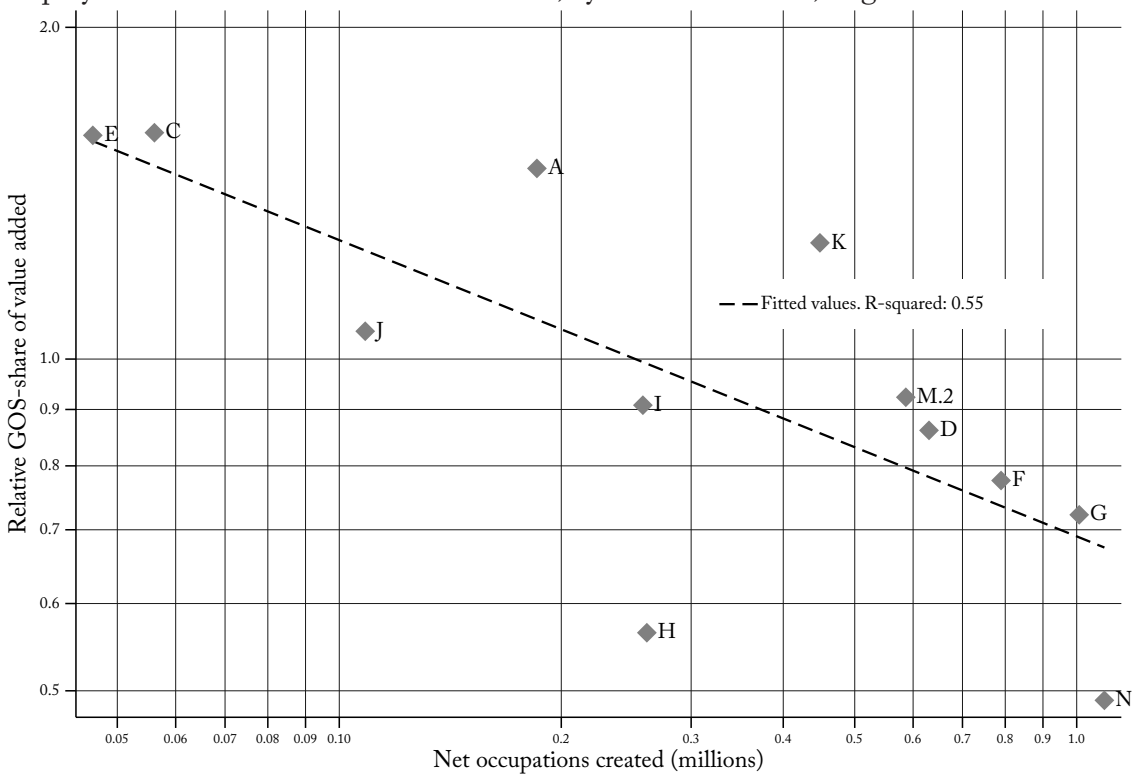
Figure 5.5 Relative labour productivity in 2016 and net employment creation from 2003 until 2016, by economic sector, Argentina



Notes: Relative labour productivity defined as the sector's yearly value added at producer prices per occupation, divided by that of the whole economy. Public sectors excluded from the figure. Occupations created (horizontal axis) are in absolute numbers.

Source: Prepared by the author based on data from INDEC. See Appendix 6 for details and the notes to Figure 5.3 for sector codes.

Figure 5.6 Relative share of gross operating surplus in value added in 2016 and net employment creation from 2003 until 2016, by economic sector, Argentina



Notes: Public sectors excluded from the figure. Relative GOS-share of value added defined as the sector's share of GOS in value added at basic prices, divided by that of the whole private sector. Occupations created (horizontal axis) are in absolute numbers.

Source: Prepared by the author based on data from INDEC. See Appendix 6 for details and the notes to Figure 5.3 for sector codes.

Before analysing in greater depth the characteristics of the leading sectors, it must first be seen whether the regressive dynamics identified above were already in place during the 2003-2011 boom, or whether they were a product of the subsequent five years. The scenario that emerges for 2003-2011 is more nuanced, with manufacturing standing still as services showed a less pronounced growth and public employment shrank in relative terms, but it is by no means a reversal. The most relevant sectors that showed a higher relative growth – or a smaller decrease – of employment from 2003 until 2011, as compared to their performance from 2003 until 2016, were retail and wholesale trade (0.0 pp against -1.4 pp), manufacturing (-0.1 pp against -1.2 pp), real estate activities (1.1 pp against 0.1 pp) and construction (2.4 pp against 1.8 pp). Those whose performance changed in the opposite direction were public administration (-0.3 pp against 1.3 pp), public health and education (-0.8 pp against 0.1 pp), private health and education (0.2 pp against 0.7 pp) and other services including domestic labour (-0.5 pp against 1.2 pp). The productivity dynamics of manufacturing from 2003 until 2011 were not particularly high either, with

slower growth than between 1993 and 1998.[103] In sum, if the 2003-2011 phase was not as regressive as the period that followed, it did not produce any evidence of a progressive structural change.

It can thus be safely concluded that a devalued exchange rate and other factors boosting cost-competitiveness were incapable of driving a structural change towards high-productivity sectors, in contrast with the neodevelopmentalist view (Bresser-Pereira 2012b, Damill and Frenkel 2014, Rapetti 2013). In fact, even during the most dynamic phase of the 2003-2011 boom, construction and real estate were the leaders in employment-creation, whilst the employment-share of manufacturing slightly contracted. Furthermore, the evolution of productivity was less than impressive. This centrally indicates that *the 2003-2011 phase had considerable shortcomings in its capacity to drive growth and the redistribution of income over a longer period*, in light of the evolution of the sectoral structure of the economy and its productivity. In the same vein, this is evidence that *the downturn beginning in 2012 was driven by the dynamics of the preceding boom*, as wage gains would erode cost competitiveness in absence of a consistent progressive structural change, thus jeopardising the continuity of both growth and redistribution.

To explore in more depth the nature of the sectors that drove the boom, Table 5.3 reports the sectors that created the most employment from 2003 until 2016. The six leading private sectors, which together accounted for 66.8% of all jobs created during the period, were manufacturing, construction, wholesale and retail trade, private health and education, and other services.[104] With the exception of manufacturing, they were not high-productivity or export-orientated activities, but rather domestic-focused sectors producing wage-goods and wage-services. Taken together, in 2016 these sectors paid average wages 28% below the average of the whole economy, and their labour productivity was 12% below average. Furthermore, only manufacturing and real estate activities were more productive than the average, and only the former had relative wages higher than unity. These leading sectors, therefore, essentially comprised the provision of housing, consumption goods (through retail trade), and personal services, which are precisely the demand to be expected from households rising in the bottom of the income distribution.

Data from the National Household Budget Surveys (*Encuesta Nacional de Gastos de los Hogares*, ENGH) of 2004/2005 and 2012/2013 cast further light on the how the patterns of demand changed. In 2004/2005, households in the bottom three quintiles of the per

[103] The 1993 national accounts indicate that manufacturing labour productivity grew at a rate of 5.5% per year during 2003 and 2004, part of which is most likely due to greater capacity utilisation, and the 2004 national accounts indicate that, between 2004 and 2011, it grew at an average rate of 2.7% per year, as opposed to 2.0% for the whole economy.

[104] If 2011 is chosen as the final year of the analysis the results are pretty much unchanged, but hotels and restaurants also become one of the most relevant sectors.

capita income distribution accounted for, respectively, 9, 14 and 17% of total household consumption, increasing to 13, 16 and 18% in 2012/2013 (a joint increase of 7 pp). These households in the bottom three quintiles of the distribution had their budgets allocated to a very large extent to wage-goods, as food and clothing alone accounted for between 46 and 59% of their expenses in 2012/2013, as opposed to 37% for the top two quintiles. Furthermore, households in the bottom three quintiles also increased their consumption-share of key goods and services that establish a link with the fastest-expanding activities: between 2004/2005 and 2012/2013, their expenditures (as a share of total household consumption on these items) rose from 36 to 44% for education, from 42 to 51% for diverse personal goods and services, from 31 to 39% for leisure, and from 33 to 43% for household goods. Therefore, as the income of households in the bottom to middle of the distribution was rising, they consumed an array or relatively more sophisticated wage-goods and services, which were provided domestically and hence drove the changes to the employment structure.

The sectors that led job-creation were also large employers of informal, low-skilled workers. The six private sectors in Table 5.3 together employed 72% of all unregistered workers in the economy in 2002, and were responsible for 96% of all net unregistered employment generated until 2016. As these jobs were created, formalisation levels – the share of registered workers in total occupations – did increase in these sectors by about 10 pp, suggesting a heated labour market at its lower end. *The fact that employment-creation was particularly strong amongst sectors intensive in informal, low-skilled labour explains one of the central drivers of income redistribution*. It furthermore establishes the proposed link in the growth-redistribution cycle, namely that *a central driver of both growth and income redistribution was the employment of relatively low-paid workers to produce the goods demanded by households rising along the lower rungs of the income ladder*.

Table 5.3 Net employment generation, relative average wages, labour productivity and value-added composition for sectors that generated more than 400,000 occupations in Argentina from 2003 and 2016

Sector	Thousands of net jobs generated, 2003-2016 (% of total)	Relative average wages, 2016	Labour productivity, 2016 (relative productivity)	Share of wages in VA, 2016	Share of GOS in VA, 2016	Share of mixed income in VA, 2016
Manufacturing	631 (9.2)	1.21	480 (1.42)	44.4	39.9	15.7
Construction	790 (11.6)	0.47	198 (0.59)	42.3	35.9	21.8
Wholesale and retail trade	1008 (14.8)	0.65	275 (0.81)	42.0	33.4	24.6
Real estate, renting and business services	449 (6.6)	0.98	602 (1.78)	29.4	59.0	11.6
Private education, health and social work	587 (8.6)	0.78	252 (0.75)	48.6	42.7	8.7
Other community, social and personal service activities	1090 (16.0)	0.42	109 (0.32)	66.7	22.7	10.6
Public administration and defence; compulsory social security	699 (10.2)	2.35	413 (1.22)	100.0	0.0	0.0
Public education, health and social work	652 (9.6)	1.52	266 (0.79)	100.0	0.0	0.0
Total of selected private sectors	**4555 (66.8)**	**0.73**	**297 (0.88)**	**42.9**	**40.6**	**16.5**
Total of selected sectors	**5906 (86.6)**	**0.97**	**305 (0.90)**	**55.9**	**31.4**	**12.7**
Grand total of the economy	**6819 (100.0)**	**1.00**	**338 (1.00)**	**50.2**	**38.9**	**10.9**

Notes: Labour productivity measured as gross added value at producer prices (thousands of 2016 Argentinean pesos per worker per year). Wages include benefits. GOS: gross operating surplus. VA: value-added.
Source: Prepared by the author based on National Accounts data. See Appendix 6 for details.

An interpretation of the sectoral dynamics under the Kirchner administrations can now be offered. The 1999-2002 crisis and the currency devaluation boosted the international cost-competitiveness of tradable sectors, as they decreased dollar (and real) wages. The decrease of output and income led to high levels of idle capacity and low domestic demand in 2002, so exports kick-started growth in 2003. After this shift in the pattern of demand towards exports, policies raising the income of households at the lower-end of the distribution (PJyJHD and MW hikes, and later AUH) raised household income

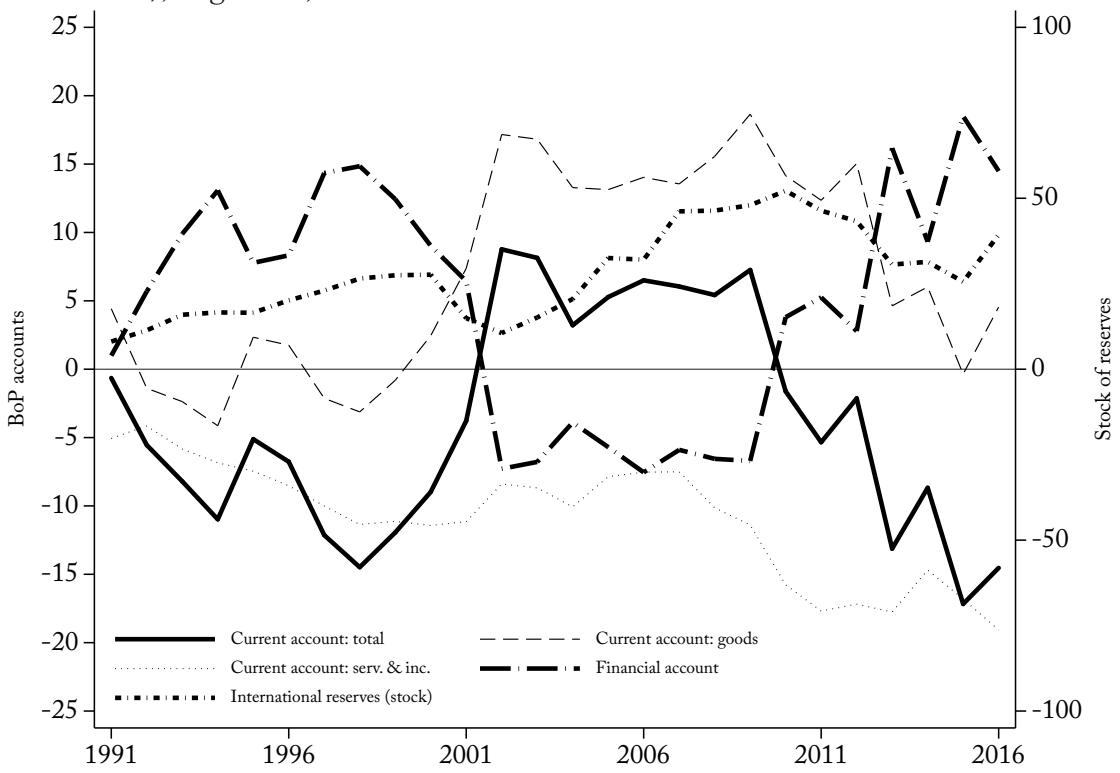
and hence demand, creating another source of effective demand. Differently from the export-push indicated above, this increased the demand for wage-goods and services. These two exogenous drivers, the one-off shift towards exports and the continuing stoking of the demand for wage-goods, interacted to generate endogenous market responses that led to the employment of mostly low-skilled, relatively low-paid workers to produce wage-goods. As the demand for such workers rose, their formalisation levels and income followed suit, thus reducing income inequality and further raising the demand for these goods, re-igniting the process.

Until 2011, this cumulative-causation process coexisted with an export drive employing comparatively better-paid workers, but this at best muted the regressive structural change. There was no evidence of substantial productivity gains in manufacturing, or even employment-creation in levels that could match the other sectors. However much currency devaluation and wage losses might have shifted the competitiveness *levels* of manufacturing and export-orientated sectors, in the absence of other policies and conditions they were incapable of producing *dynamic competitiveness gains*. In other words, from the very beginning the 2003-2011 boom depended on level-factors to forestall a regressive structural change, but these factors would endogenously wane.

5.4. The looming balance-of-payments constraint: Argentina's insertion into the world market under the Kirchner administrations

Having reviewed the broad traces of the pattern of accumulation, in section 5.2, and how they were associated to a changing sectoral composition of the economy, in section 5.3, the present section analyses the evolution of Argentina's trade patterns and the balance-of-payments constraint under the Kirchner governments. It shows how this constraint was gradually but continuously tightened from 2003 onwards, as the growth of imports substantially outpaced that of exports. Moreover, even during the years with a devalued currency the technological composition of exports did not improve substantially, suggesting the lack of a coherent industrial policy strategy, whilst imports became more concentrated in intermediate goods, central to the continuity of accumulation.

Figure 5.7 Selected balance-of-payments accounts and stock of foreign reserves (current US$ billion), Argentina, 2001-2015

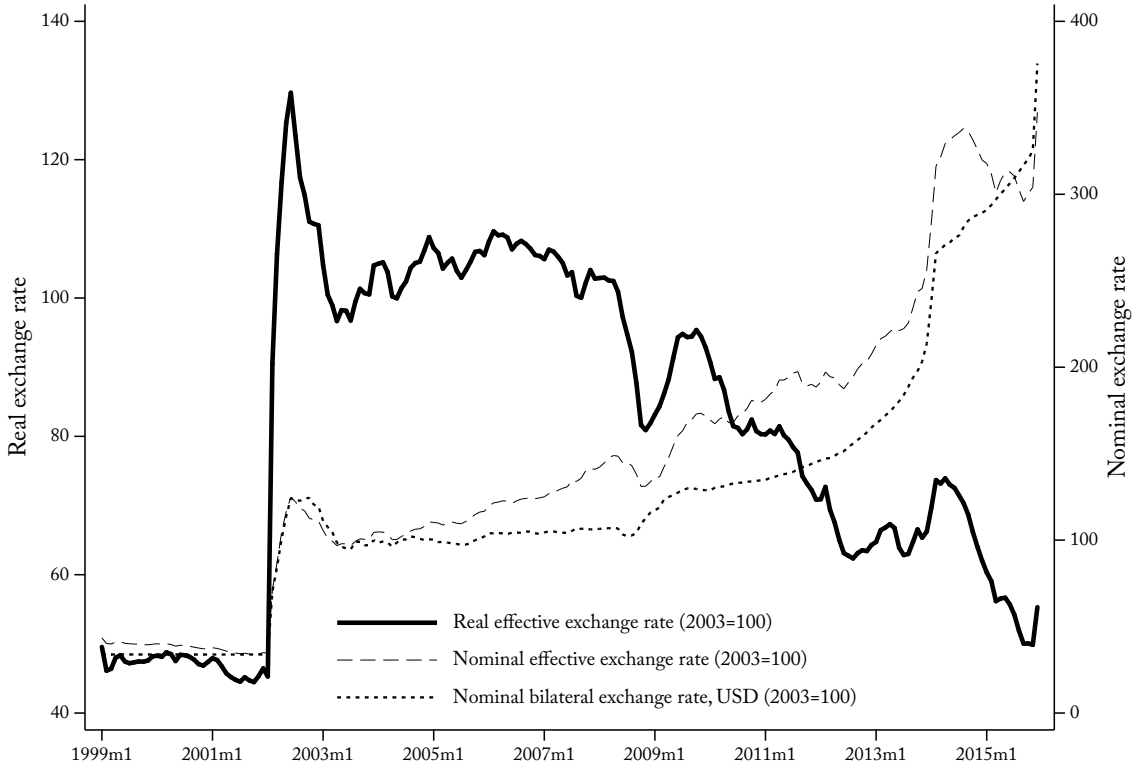


Source: Prepared by the author based on data from the IMF.

As shown in Figure 5.7, the period between 2002 and 2009 were the only years Argentina's current account was in surplus since 1991. It was preceded by the convertibility regime, when even the balance-of-trade in goods tended to be negative and there was a strong reliance on foreign savings through the privatisations of state assets and other capital inflows (Azpiazu and Basualdo 2004, Medeiros 2009). Growing foreign indebtedness followed from the balance-of-trade and current account deficits, turning a positive net foreign investment position of US$ 14 billion in 1991 to a debt of US$ 61 billion in 2000 (INDEC).[105] From 2009 onwards, on the other hand, the balance-of-trade remained positive, if continuously decreasing, but, combined to a falling services-and-income account, there was a historic deficit of US$ 17 billion in the current account in 2015.

[105] Net foreign investment position, calculated with public debt bonds valued according to their market value.

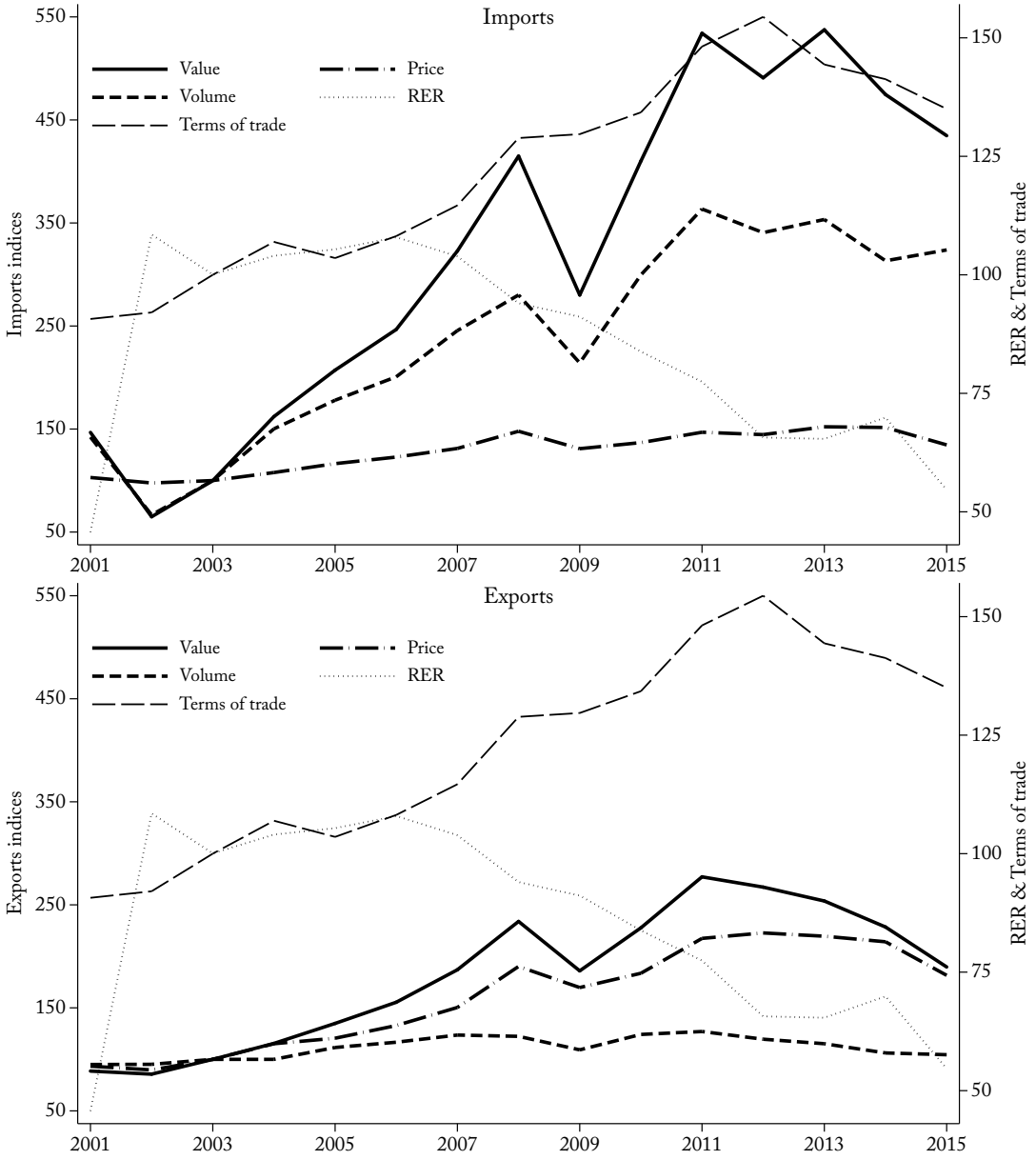
Figure 5.8 Real and nominal effective exchange rate and nominal bilateral exchange rate indices for Argentina, January 1999 – December 2015 (2003 average = 100)



Notes: See the notes to Table 5.1 for the exchange rate.
Source: Prepared by the author based on data from the BIS (exchange rate) and Pricestat (inflation).

The first element that explains this foreign surplus and its reversal was the behaviour of the exchange rate. As seen in Figure 5.8 (see also Table A4.1), the exchange rate experienced substantial swings between 1999 and 2015. After the maxi-devaluation of 2002 and some turbulence in 2003, the bilateral exchange rate against the US dollar was kept pretty much stable at 3 ARS/USD between late 2003 and September 2008 (the exchange-rate regimes are discussed in section 5.5, see also Frenkel and Rapetti 2008). The real effective exchange rate was kept within narrow bounds from 2003 until 2008 as well, as it deviated at most 10% from its average level in 2003. As inflation picked up, however, reaching yearly rates above 20% in the beginning of 2008, the real exchange rate appreciated for most of the time until the end of 2015 alongside growing current account deficits.

Figure 5.9 Real exchange rate and terms of trade indices, and price, quantity and volume indices for exports and imports, Argentina, 2001-2015 (2003 = 100)



Notes: See the notes to Table 5.1 for the exchange rate.

Source: Prepared by the author based on data from the BIS (exchange rate), Pricestat (inflation), and INDEC (imports, exports and terms of trade).

There were more than exchange-rate dynamics accounting for the foreign deficit, however. Between 2003 and 2015 the growth of imports, in both quantity and value, was much larger than that of exports (see Figure 5.9 and Table 5.4). In fact, the value of imports in 2011 was about 5.4 times its level in 2003, compared to 2.2 times higher for exports. Not only this, but *the gap grew continuously until 2008*, and then oscillated with an upwards trend until the end of the period: the index for imports value was 40.3% higher than that for exports in 2004, 58.7% higher in 2006 and 77.4% higher in 2008. Furthermore,

this occurred despite almost constant gains in the terms of trade, which improved by 54.4% between 2003 and 2012. The key importance of this result is to indicate that, *even with a significantly undervalued exchange rate between 2003 and 2008 and buoyed by positive international price movements, the comparative rate of growth of imports and exports pointed to an eventual trade deficit*.

Table 5.4 Exports and imports indices (2003=100) for Argentina, 2001-2015

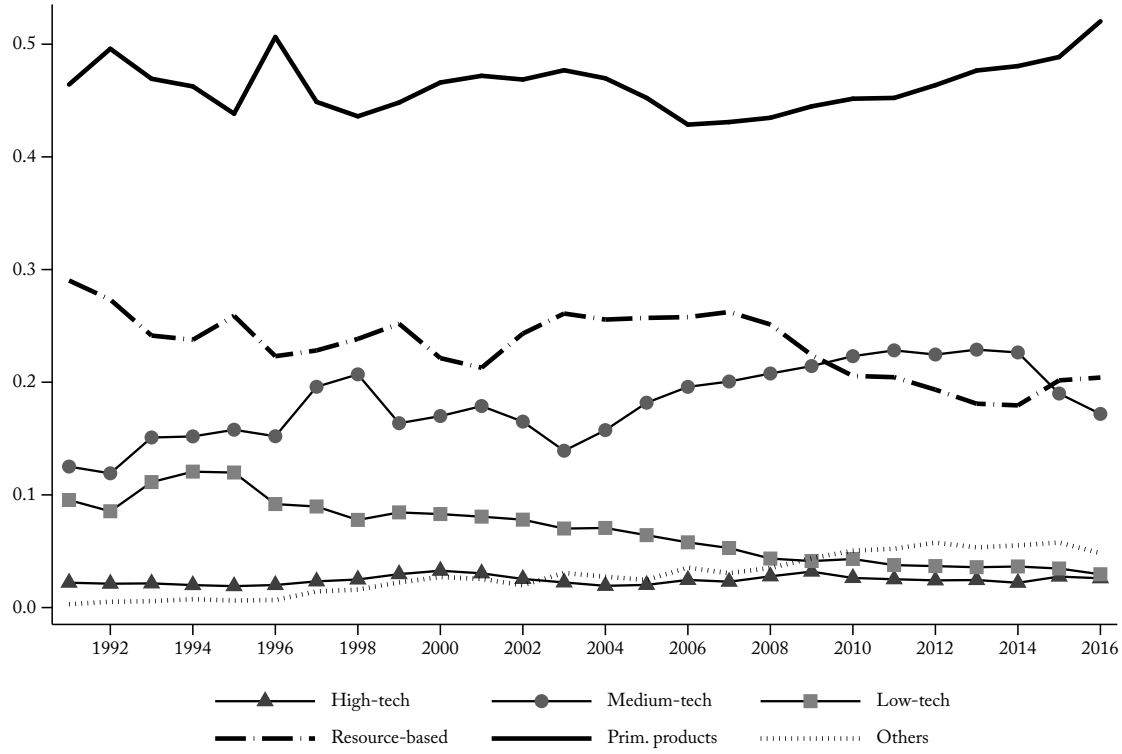
Year	Exports, value	Exports, quantity	Exports, price	Imports, value	Imports, quantity	Imports, price
2001	88.7	95.0	93.4	146.7	142.2	102.9
2002	85.7	95.2	89.8	64.9	66.6	97.6
2003	100.0	100.0	100.0	100.0	100.0	100.0
2004	115.5	100.0	115.2	162.1	150.2	107.8
2005	134.9	111.5	120.5	207.1	177.9	116.4
2006	155.4	116.6	132.8	246.6	200.7	122.8
2007	187.0	123.6	150.4	322.8	245.6	131.2
2008	233.9	122.4	190.1	414.9	280.1	147.8
2009	185.9	109.2	169.7	280.1	214.2	130.9
2010	227.7	124.2	183.6	410.0	299.5	136.8
2011	277.1	127.0	217.4	534.1	363.5	146.9
2012	267.1	119.6	222.7	490.8	340.6	144.6
2013	253.7	115.2	219.6	537.5	353.4	152.2
2014	228.5	106.2	214.1	474.7	313.3	151.5
2015	189.7	104.5	181.6	434.7	323.8	134.6

Notes: See the notes to Table 5.1 for the exchange rate.

Source: Prepared by the author based on data from the BIS (exchange rate), Pricestat (inflation), and INDEC (imports, exports and terms of trade).

Even more problematic from a medium-term perspective, export growth was driven mainly by price dynamics, whereas imports grew mostly in quantity (see Table 5.4; the groups of products behind this growth are analysed below). Between 2003 and 2011, the average annualised growth rate of the quantity of exports was 3.0%, whereas of their price was 10.2%. Conversely, the same figures for imports were, respectively, 17.5% and 4.9%. This further demonstrates that the shift in key macroeconomic prices the convertibility period and the 1999-2002 crisis brought about, if it did offer a temporary relief for the balance-of-payments constraint, could not change the country's economy in ways that would sustain higher growth rates going forward.

Figure 5.10 Share of exported goods according to technological sophistication, Argentina, 1991-2016 (current prices)



Note: Technological classification based on Lall (2000).
Source: Prepared by the author based on data from COMTRADE.

As for the technological intensity of exports, the data presented in Figure 5.10 show there was stability with changes at the margins. Argentinean exports have been concentrated on primary products and resource-based manufactured goods for decades (Azpiazu and Schorr 2010a), which together accounted for about 70% of total exports from 1992 onwards. The main categories of primary products were related to cereals, seeds, and unprocessed meat. In particular, unmilled wheat and maize and unprocessed soybeans represented on average 13.2% of total exports value between 2003 and 2015, with a further 13.3% represented by soybean oilcakes (used for animal feeding) and 2.7% by unprocessed meat.[106] Soybean oil was the main resource-based manufacture, with an average share of 7.7% of exports. Regarding medium-technology goods, they were mostly road vehicles and their parts, including passenger and transport vehicles, which represented on average 7.3% of total exports between 2001 and 2015.

Between 2002 and 2007, resource-based goods rose from 24.3 to 26.2%, whilst medium-technology goods rose from 16.4 to 20.0%. The increase of medium-technology goods was almost entirely explained by vehicles, whose share of exports rose by 3.2 pp between 2002 and 2007. Growing exports to Brazil alone accounting for 65% of the higher export

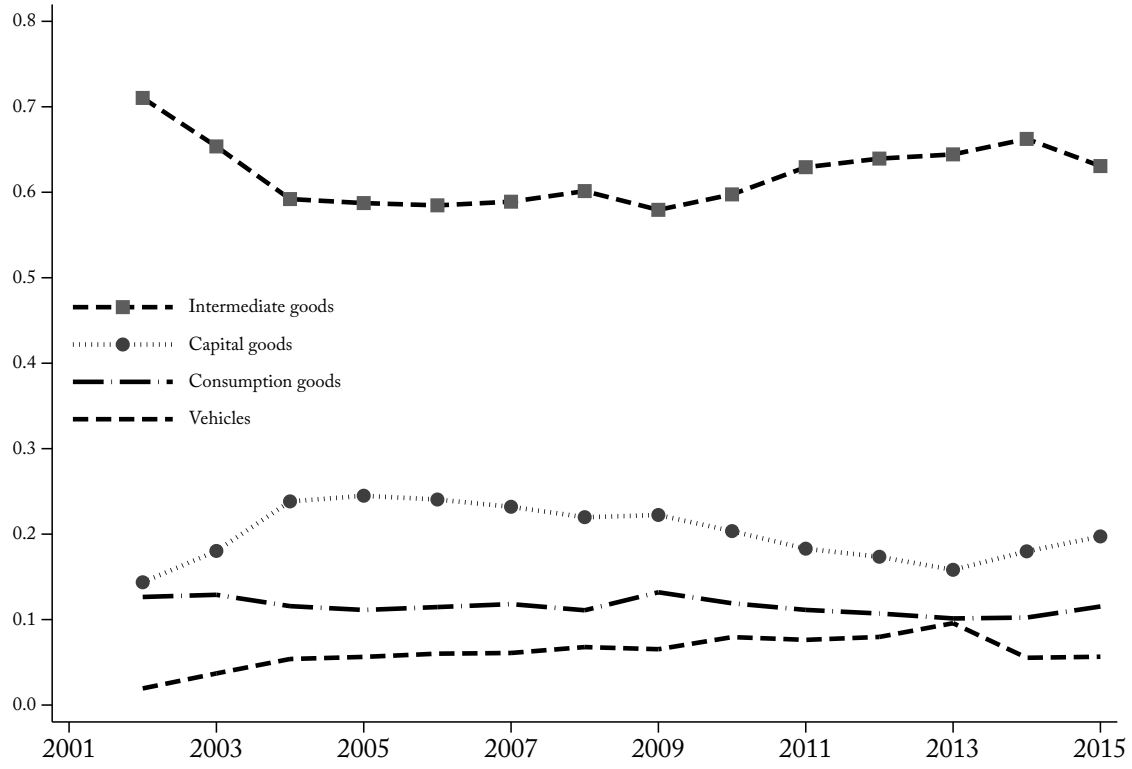
[106] Trade data from UNCOMTRADE, based on SITC rev. 2 classification.

value of vehicles, when the Brazilian real was appreciating and the integration of the regional trade bloc Mercosur was increasing. As for resource-based exports, their rise was mostly due to soybean oils, whose share of export value grew by 1.7 pp between 2002 and 2007 (based on an 88.3% increase in volume and a 74.4% increase in prices). During this period, no technology-intensive goods increased substantially in value, and in spite of the rise of medium-technology goods, their share of total exports was still below that of 1998 (20.7%). Therefore, even when the real exchange rate was substantially depreciated, there was no consistent upgrading of Argentina's exports.

From 2007 until 2015, on the other hand, primary products increased their share from 43.1 to 48.9%, whilst resource-based manufactured goods fell from 26.1 to 20.2% and other categories were mostly constant. Once again, soy was at the heart of the rise of primary products: the share of soybean oilcakes in total exports rose from 11.1 to 18.8% from 2007 until 2015, based on a 39.9% increase in prices and a 74.5% increase in volume. The government's attempts to introduce a variable tax on commodity exports, discussed in section 5.3, was in parts a reaction to these price dynamics, but there was no consistent attempt to revert the dependence on soy exports, as measures benefitting the soy value-chain were also put in place. Lapegna (2017) indicates, for example, that the government actively helped the introduction of genetically modified soybean varieties into the country, offered incentives for the expansion of large international companies into the country (particularly Cargill and Monsanto), and gave a series of subsidies to the agro-industry. Consequently, the share of soybean-based goods in Argentinean exports continued to grow.

Taken together, these trends indicate that the composition of Argentinean exports was essentially stable in terms of their technological content during the 2003-2011 boom. Resource-based and low-technology manufactured goods gave space to medium-technology manufactures and primary products, with little impact on the overall capacity of the exporting sector generating quality jobs, technology spill-overs and dynamically increasing its demand. This picture did deteriorate after 2011, as primary products gained further space, but it was not positive to begin with. In other words, *the Kirchner governments could not improve the technological intensity of the country's export bill, but rather managed its slow deterioration*.

Figure 5.11 Share of imported goods according to broad economic categories, Argentina, 2002-2015 (current prices)



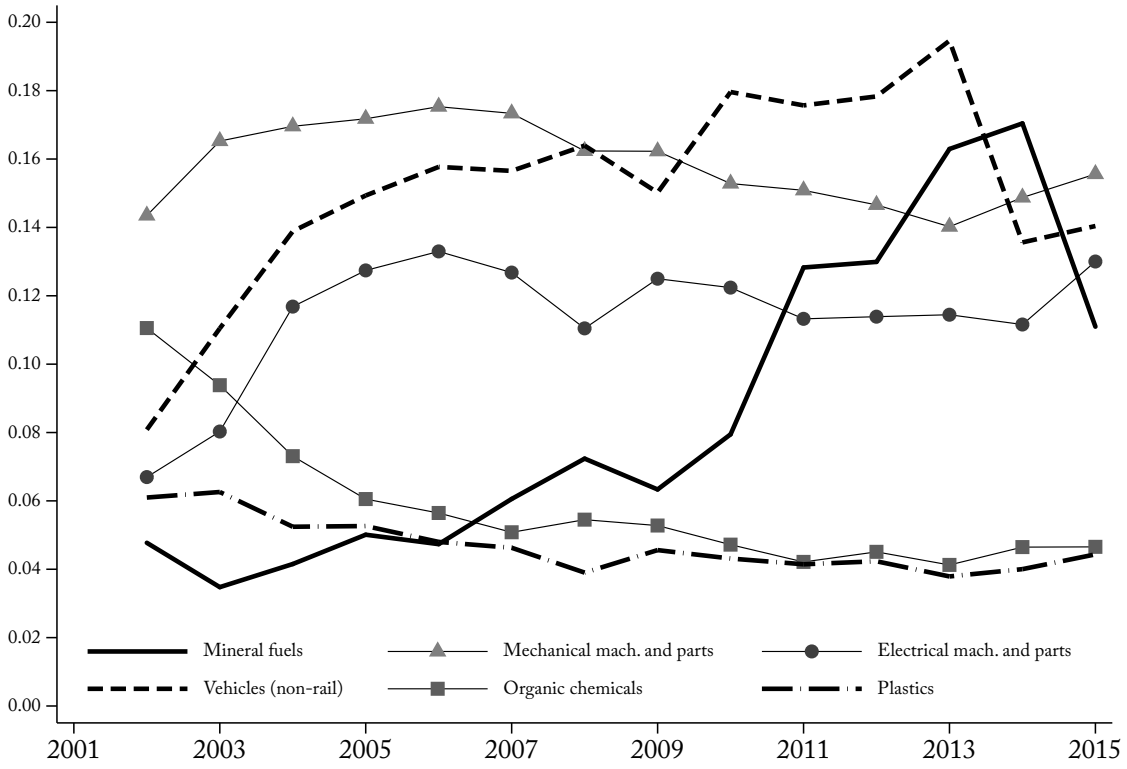
Note: Goods classified by the Broad Economic Categories classification (BEC, rev. 4).
Source: Prepared by the author based on data from COMTRADE (United Nations 2017).

As regards the country's imports bill, the composition of goods according to broad economic categories (Figure 5.11) shows they were concentrated in intermediate and capital goods (the specific goods are analysed below). Capital goods increased their share from 14.3% in 2002 to 24.5% in 2005, and then slowly but steadily decreased until reaching 15.8% 2013. This rise in the share of capital goods, amidst rising total imports (see Table 5.4), was initially due to the growing investment rate of the economy, which in constant domestic currency nearly trebled between 2002 and 2005 (Table A4.3). As investment grew much more slowly after 2005, however, the stable imports-share of capital goods indicates that domestic investment became more dependent on foreign capital goods, perhaps suggesting a disarticulation of productive chains due to the incentives for importing capital goods discussed in section 5.3 (Bugna and Porta 2007).

Intermediate goods fluctuated around 60% of total imports most of the time, with a rising trend after 2009, whereas final consumption goods accounted for a constant and relatively small share of about 10%. Passenger vehicles, whose use as either consumption or investment goods is hard to determine, displayed a clearly rising trend from 2002 until 2013, increasing their share of imports by almost 8 pp. Exports of passenger vehicles also increased substantially over the same period, with over 80% going to the Brazilian market in 2013, indicating a greater integration of the industry with Mercosur. In spite of greater

vehicle exports, however, Argentina went form a balanced trade in this category, in 2003, to a deficit of US$ 4 billion in 2013.

Figure 5.12 Share of the six largest groups of imported goods, Argentina, 2002-2015 (current prices)



Notes: Goods classified by chapters of the Harmonized System 2002 classification (HS2002, 2 digits). These six groups correspond, in the order presented in the legend, to the following HS chapters: 27, 84, 85, 87, 29, and 39.

Source: Prepared by the author based on data from WITS (World Bank 2017).

A closer look at the main Argentinean imports (Figure 5.12) reveals that three groups of products were the key determinants: electrical machinery, vehicles and mineral fuels. Between 2002 and 2013, imports of these goods rose by respectively about US$ 7, 13 and 11 billion, with a joint increase of US$ 22 billion between 2009 and 2013. Compared to a trade balance that, at its highest, was positive to the tune of US$ 19 billion in 2009, these were goods whose imports had macroeconomic implications. Electrical machinery grew from 6.7% in 2002 to 12.7% in 2005, with a particular importance for telecommunication equipment (mostly finished goods, but also their parts), and oscillated around this value until 2015. Non-rail vehicles in turn rose from 8.1% of total imports in 2002 to 19.5% in 2013, driven almost entirely by finished capital goods (2.2 pp of the rise) and finished passenger vehicles (7.6 pp of the rise). As for mineral fuels, they rose from 4.8 to 16.3% of total imports between 2002 and 2013, driven by a rise of 5.5 pp in refined petroleum and other oils and of 8.2 pp in natural gas (around 40% of which came from Bolivia).

Rising mineral fuel imports made the trade balance in this category go from a surplus of US$ 3.9 billion, in 2002, to a deficit of US$ 8.5 billion, in 2013. It is relevant to notice that the domestic production of natural gas and crude oil declined by 30 and 35%, respectively, between 2003 and 2011, most likely because of the sustained low investment rates of leading companies during the 2000s (see Pérez Roig 2012). Another central factor behind this large deficit were domestic subsidies to energy and transportation, meant to control inflation and shield consumers from international energy price hikes, but also maintaining high levels of demand for these goods (Bril-Mascarenhas and Post 2015, Gezmiş 2018). According to data presented by Gezmiş (2018: 80), energy and fuel subsidies increased from 0.6% of GDP in 2004 to 2.8% in 2013, in a process with clear bearings on fiscal sustainability, as well as regressive distributional effects (on this regard, see Segal 2011, 2012).

This section has explored the changing international trade patterns of the Argentinean economy under the Kirchner administrations, coming to the conclusion that the productive structure was incapable of coping with fast-paced accumulation without eventually generating growing trade deficits. Whilst exports did increase in value over the 2000s, this was mostly a matter of rising prices, as their quantum increased slowly and there was no appreciable improvement of their technological intensity. Imports, on the other hand, grew considerably faster, particularly in intermediate and capital goods. This led to a current-account deficit from 2009 onwards, which intensified as the currency appreciated in real terms, the country lost reserves, and energy subsidies were increased, but the roots of this deficit were clearly present from the very beginning of the 2003-2011 boom. The clearest demonstration of this is that the growth of imports outstripped that of exports in every single year from 2003 until 2008.

These results in terms of Argentina's trade pattern stand in contrast to interpretations that consider that there was a stable and viable pattern of accumulation between 2003 and 2008, centred around an undervalued currency (Bresser-Pereira 2007, Damill *et al.* 2015, Frenkel and Rapetti 2008). This interpretation fails even in what should arguably be its strongest point, viz. that the balance-of-payments constraint to growth was fundamentally altered under a devalued exchange rate. Yet there is no evidence that a different *level* of the latter had sufficient *dynamic implications* to sustain accumulation over the longer term.[107] To guarantee balance-of-payments solvency, it would be necessary to have a series of other

[107] Faced against this sort of evidence, some authors have resorted to *ad hoc* arguments that, besides not being justified, in effect would amount to admitting the whole exchange-rate-based development strategy is flawed: 'The negative impact on the productive structures have weakened the reaction of the Latin American economies to the new circumstances, for example slowing the responses of the tradable sectors to exchange rate signals, after long periods of real appreciation' (Damill and Frenkel 2017: 1). Perhaps it would make more sense to admit climbing up global value chains is a much more complex process.

policies to promote the structural upgrading of the economy, or else resort to periodic devaluations of the real exchange rate as growth picked up. But as shown in the next section, even maintaining, let alone further devaluing the real exchange rate, would have serious inflationary implications if wage gains were to be preserved.

5.5. Inflationary dynamics, wage gains and the exchange rate

This section analyses the evolution of inflation in Argentina, seen in relation to the exchange rate and wage dynamics. The key dilemma for inflation-management during the Kirchner administrations was how to keep it reasonably low and stable, whilst simultaneously accommodating real wage growth and a competitive real exchange rate. Labour income, as shown in section 5.2, was a key driver of effective demand and redistribution, so curtailing it would amount to a reversal of the whole pattern of accumulation. The real exchange rate, regardless of its capacity to drive a progressive structural change, needed to be kept sufficiently low to guarantee balance-of-payments solvency. This was strong constraint, given that, as pointed out in section 5.2, Argentina was excluded from international capital markets for most of the analysed period in light of the moratorium on foreign debt. As shown below, squaring this circle was impossible right from when growth picked up.

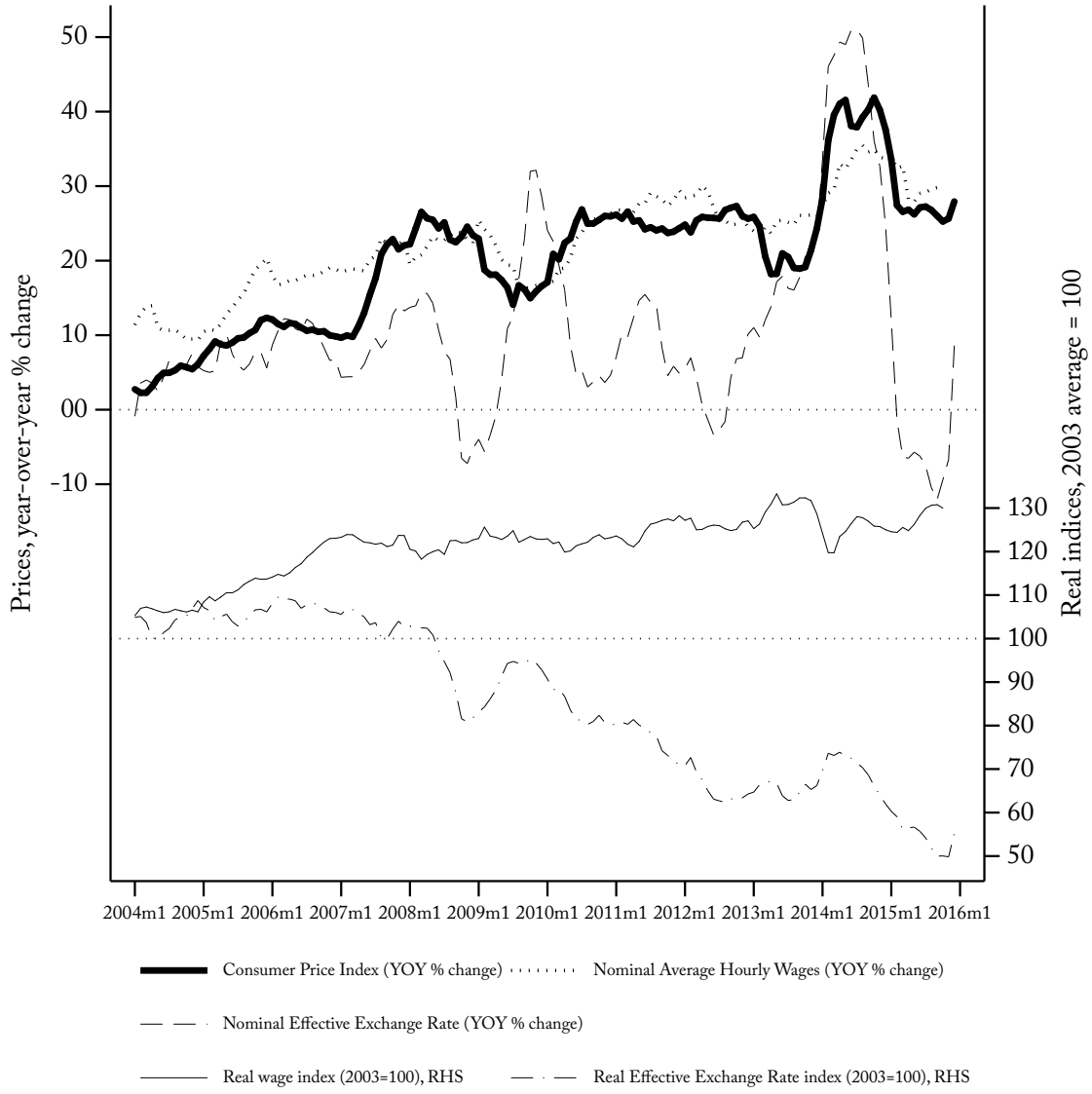
During the convertibility period, inflation rates were stable and low. They remained below 1% per year from 1996 until 2001 – dropping to negative levels in the last three years, as the domestic crisis unfolded (Table A4.1). As discussed in section 5.2, the key element in this was the abdication of monetary policy autonomy and the fixed nominal exchange rate, which worked as an anchor for prices and as disciplinary mechanism over capital and labour (Bonnet and Piva 2012). The convertibility regime, in a scenario with low aggregate demand, labour repression and a regressive shift in the distribution of income, also led to average real hourly wages decreasing about 12% between 1994 and 1999, helping to keep inflation in check.[108]

With the end of the convertibility period and the currency devaluation, there was a short and intense spike in inflation, which reached 40.9% in 2002 (official CPI). This was a transitory effect, however. With intense slack in the labour market, wages would take a long time to recover, whereas the nominal effective exchange rate slightly appreciated until the middle of 2003. The result was a low-demand, low-wages, low-inflation scenario at the beginning of the 2003 boom, with year-over-year inflation dipping to 2.3% in

[108] Average hourly wage data compiled by SEDLAC, based on data from the household surveys EPH.

February 2004. This is the environment from which the boom would be launched, and also, as argued below, one which it would quickly change in all its dimensions.

Figure 5.13 Inflation, wages and exchange rate for Argentina, January 2004 to December 2015



Notes: The real effective exchange rate is the broad effective exchange rate the BIS provides, which weights nominal bilateral exchange rates by trade flows between 61 countries and deflates them by corresponding price indices. The version used throughout this thesis substitutes the deflator used for the Argentinean economy for the Pricestat deflator, which corrects for the post-2007 unreliability of the official Consumer Price Index. The real exchange rate is defined in terms of local currency units per foreign currency (a decrease means an appreciation of the domestic currency).

Source: Prepared by the author based on data from the BIS (exchange rate), Pricestat (inflation) and INDEC (monthly average wage index).

As shown in Figure 5.13, from 2004 onwards inflation quickly rose and then remained at high levels. By mid-2005, it was already at 10% (year-over-year), around which it fluctuated until bumping up to a new average somewhat above 20% between mid-2007 and late 2013. It thus cannot be said that inflation was continuously rising during the

period, it rather being the case that it shifted upwards during relatively brief episodes and remained consistently high. Disregarding the dip and readjustment around the world financial crisis of 2008, there were three stretches when inflation rates rose to new levels. The first occurred from March 2004 until December 2005, as yearly inflation picked up 10 pp; the second between April 2007 and March 2008, when it rose by 16 pp; and the third between October 2013 and April 2014, with an increase of 22 pp. None of the disinflation episodes that happened throughout the years could substantially alter the level of inflation, however, and much less its trajectory.

In this overall scenario of stepwise-rising inflation, the association between price levels, nominal wages and the real exchange rate can be divided into three periods. The first extends until March 2007, when changes to the nominal effective exchange rate closely tracked inflation and there were continuous real wage gains. During this period, the nominal bilateral exchange rate against the US dollar was kept constant, at 3:1, but the appreciation of several of Argentina's trade partners, particularly Brazil, led to a depreciation of the nominal effective exchange rate (until March 2007, the latter had lost 27% against its average value in 2003) and of the real effective exchange rate (which lost 7%). Furthermore, unemployment decreased from 15 to 9% (data from the SEDLAC database), as output grew over 8% per year, indicating that wage gains were easily absorbed by the labour market (as shown in chapter 6, this was also the period with the most intense redistribution of income). According to data from INDEC presented in Figure 5.13, this was also the only spell with consistent gains in average monthly wages.[109] This first period was also, however, one of accelerating inflation: from 0.1% per month in February 2004, inflation rose to 2.3% per month in March 2007. From this moment onwards, domestic inflation rose above the changes to the nominal effective exchange rate, which made it necessary, in order to secure a constant real effective exchange rate, to devalue the currency against the dollar.

The second period extends from the beginning of 2009 until the end of 2013, when the authorities changed their approach to exchange-rate management. Instead of keeping the bilateral exchange rate against the dollar fixed, as happened during the previous period, in the beginning of 2009 it was devalued from 3.10 to 3.80 ARS/USD. This reverted the appreciation of about 20% of the real exchange rate that had occurred until December

[109] There are discrepancies between three sources: the national accounts; information SEDLAC organises based on the EPH surveys; and the information INDEC presents combining surveys to private employers and data from the EPH. In the national accounts, average yearly wages per occupation grow much more than wage data in the other sources, and were thus disregarded. SEDLAC reports average hourly wages for the main occupation, whereas INDEC presents average monthly wages. The resulting trends are comparable, but from 2008 onwards the accumulated gains in real wages (taking 2003 as the base year) are on average 7 pp higher in the data from SEDLAC.

2009, compared to the average level of 2003, but it also spiked yearly inflation rates up from 15.0%, in October 2009, to 26.9% in July 2010. Therefore, if the level of the real exchange rate was to be maintained, further devaluations were necessary, but there was a clear risk of price levels spiralling out of control as devaluations chased inflation. To restrain the demand for foreign currency and thus add some policy space to the management of the exchange rate, in light of growing current-account deficits (see section 5.4), in November 2011 the government also introduced controls to the foreign exchange market and limited the profit remittances of firms.

Another key element in this period were domestic price controls, used as a means to hold back the overall inflation index and reduce inflation's impact on household budgets (Bonnet 2016, Bril-Mascarenhas and Post 2015). The main items were subsidies to energy imports (particularly gas), the effects of which on the balance-of-trade have been analysed in section 5.4, and price freezes applied to household utilities and transport, with fiscal transfers to the companies providing these services to compensate for lower consumer prices. Maintaining price freezes in these services, amidst overall high levels of inflation, led to distortions in relative prices and mounting pressure on the government budget: it is estimated that, by 2011, the cost of public transport would have to rise by more than 300% and the natural gas distribution margin by more than 150%, if subsidies were removed (Bril-Mascarenhas and Post 2015: 112), and that total subsidies reached approximately 5% of GDP in 2013 (Damill *et al.* 2015: 13). Clearly, this was an unsustainable scenario over the medium term.

Price freezes and foreign exchange controls reduced the pass-through of the nominal exchange rate to domestic prices, but they were incapable of significantly curbing current-account deficits. The dilemma thus remained of whether to attempt to keep the real exchange rate stable, risking rising inflation via successive devaluations, or to let the exchange rate appreciate as a means of controlling inflation, but risking to heighten foreign imbalances. In this scenario, the authorities let the real exchange rate appreciate in real terms from mid-2009 until the end of 2013, although accompanied by smaller nominal appreciations: in December 2013, the bilateral exchange against the dollar was at 6.30, up from 3.80 in 2009, whilst the real effective exchange rate was 34% below its average in 2003.

This period between 2009 and the end of 2013 thus had an appreciating real exchange rate and a depreciating nominal exchange rate, whilst changes to nominal wages and the inflation rate were basically coincident (i.e. there were no real gains in average monthly wages). Inflation, if high, was contained within bands (yearly rates between 14 and 27%), although at rising costs given the subsidies put in place to contain it. This suggests there

was a heightened, although not explosive, distributive conflict: nominal wages and prices rose fast as workers and capitalists attempted to increase their real income, but neither side could get the upper hand and the resulting real wages stagnated. Meanwhile, the government attempted to mediate the conflict via subsidies that affected the income of different constituencies and sectors, whilst the appreciation of the real exchange rate increased real income across the board.

The key process that allowed for the wage and price dynamics from 2009 onwards was the exchange-rate policy of the period, with regular nominal devaluations (Piva 2015a, 2015b). This stands in contrast to the convertibility period, when market discipline was imposed on the terms of the distributive conflict via the fixed nominal exchange rate and the lack of monetary policy autonomy (Bonnet 2016). On the contrary, from 2009 onwards there was no effective disciplining mechanism imposed on the distributive conflict, but rather its political mediation via subsidies and an 'accommodating' exchange-rate policy which allowed for nominal price and wage rises via recurrent nominal currency devaluations.

The rising costs of price controls, the continuing current-account deficits, and the incapacity of restoring growth led to a period of macroeconomic turbulence from 2014 until 2015. After a continuous loss of foreign reserves between January and November 2013, from US$ 43 billion to US$ 31 billion (data from the IMF), the government reduced its interventions in the foreign exchange market and let the nominal exchange rate devalue substantially again. The official exchange rate went from 6.00 ARS/USD in November 2013 to 8.00 in February 2014, leading to an immediate response of inflation, which shot up by 20 pp until April 2014. In effect, the government was incapable of finding an effective framework to contain inflation, guarantee exchange-rate stability, reign in the balance-of-payments constraint and promote growth. The result was that the nominal exchange rate continuously depreciated, mirrored closely in price rises, without wage gains or economic growth, whilst the distribution of income also stagnated until the end of 2015. At this moment, it was clear that the model had broken down.

The key issue that indicates the inability of the government to effectively displace the inflation constraint was that, between 2004 and 2015, *there was no period with stable inflation, real wage gains and a constant real exchange rate*, let alone low inflation. It was only until 2007 that real monthly wages rose consistently, but this came at the cost of rising inflation and a depreciating nominal effective exchange rate required to stabilise the real exchange rate. Moreover, real wage gains occurred when unemployment levels were high and the economy was still recovering from the effects of the 1999-2002 crisis. Hence, the conditions under which there were wage gains and the real exchange rate was maintained stable and devalued until 2007, in the absence of nominal devaluations against the dollar,

were stringent: there was slack in the labour market and Argentina's trade partners were appreciating their own currencies, but, nevertheless, this led to rising inflation. During the second period, appreciations of the real exchange rate, price freezes and foreign exchange controls were used to counterbalance inflation, but this had unsustainable fiscal costs and, as seen in the section 5.4, led to escalating current-account deficits. The third period was then simply the breakdown of the whole arrangement, with a series of currency devaluations increasing inflation as real wages oscillated, the current-account remained negative and growth did not resume.

Another way of seeing this is that the convertibility period, the 1992-2002 crisis and the currency devaluation provided level effects for the economy in the form of low wages, idle capacity, and international competitiveness, but from the very beginning real wage gains implied eating away at these initial conditions. The situation did deteriorate over the years and ultimately broke down, but the basic dilemma was present from the onset: keeping a devalued exchange rate and real wage gains, without a progressive structural change that dynamically increased productivity and foreign competitiveness, would require recurrent devaluations of the nominal exchange rate that, if pursued, would eventually lead to a devaluation-inflation spiral. The different exchange-rate regimes discussed above, price freezes and foreign-exchange controls were costly and ultimately incapable of escaping the terms of this dilemma and securing macroeconomic stability. This indicates that, for the pattern of accumulation to be feasible over a longer period, a series of broader policies were needed, capable of improving the productive structure of the economy, raising productivity, altering the distribution of income in favour of workers, and affecting price formation mechanisms.

5.6. Conclusion

This chapter has explored Argentina's pattern of accumulation under the Kirchner governments (2003-2015), focusing on identifying its drivers of growth and redistribution and the evolution of its constraints. This was approached by first locating the mechanisms that, between 2003-2011, produced growth and redistribution with positive results in the balance-of-payments. The second dimension was investigating the extent to which the breakdown of growth and redistribution from 2012 onwards was already incipient in the previous boom. The conclusions indicate that, from the beginning of the boom, the economy was incapable of displacing its constraints, but could only grow and redistribute income by moving towards a balance-of-payments deficit or raising inflation, with unsustainable implications.

Section 5.2 showed that growth was driven by a changing combination of foreign and domestic sources of demand. The 1999-2002 crisis delivered brutal wage losses, idle capacity and a devalued exchange rate, which allowed for exports to lead growth in the initial years of the 2003-2011 boom. Social policies in the form of MW hikes and CCTs then shifted the pattern of demand towards wage-goods and domestic consumption and, as growth picked, the labour market responded. A heated labour market led to real wage gains and labour formalisation, cementing the domestic-demand driver of growth, whilst foreign competitiveness waned in light of (real and dollar) wage gains and a real appreciation of the exchange rate. This section also showed how, in spite of having achieved some of the fastest growth rates in the world during this period, investment rates did not pick up substantially, but remained volatile and most of the time below their real value in 1998.

Section 5.3 then explored how the growth process under the Kirchners transformed the productive structure of the Argentinean economy, showing that the sectors that created the most employment had below-average labour productivity, capital-intensity and wages. This meant that there was a regressive structural change underway, in contradistinction to the ISI period when employment-creation was concentrated in high-wages, high-productivity sectors. Although the regressive structural change intensified after 2011, it was present from the beginning of the boom, highlighting that even during the high-growth years the productive structure of the economy was not consistently upgraded. This section also showed that the leading sectors were mostly the providers of wage-goods and services, which led to the identification of a cumulative-causation process whereby growth, income redistribution and regressive structural change fed back on each other.

Sections 5.4 and 5.5 then explored the evolution of the economy's constraints, concluding that from the beginning of the growth period there were clear signs they were tightening in unsustainable ways. Section 5.4 showed there were three processes of particular significance, already underway during the devalued-exchange-rate period of 2003-2008, which gradually pressured the balance-of-payments. First, imports grew faster than exports for all years, and did so at an accelerating pace. Second, the growth of exports was mostly due to price variations, without a significant impulse of production that could engender a continuously improving balance-of-trade. Third, the technological intensity of the export bill did not improve, but rather continued to be concentrated in primary products and resource-based manufactured goods. Therefore, at no moment were there signs that the country's international insertion was dynamically improving, and balance-of-payments sustainability depended on positive trends in international commodity prices. So much for the argument that a low level of the real exchange would induce a cumulative-causation

process with dynamic gains: the devalued exchange rate did not equate even the balance-of-payments constraint between 2003 and 2008.

Section 5.5 analysed the dynamics of inflation, and concluded that the country was not able to meet the triple goal of maintaining a devalued exchange rate, keeping inflation under control, and delivering wage gains. After inflation picked up, stabilising the real exchange rate at a low level would require continuous nominal devaluations, but, given the inflationary impact of devaluations, this clearly risked a slide into hyperinflation with devaluations chasing after hikes in inflation. The country avoided this by letting the currency appreciate in real terms, although inflation continued to rise in steps. The different arrangements put in place to try to square this circle, such as energy subsidies, price freezes and foreign-exchange controls, had prohibitive fiscal costs and were ultimately ineffective.

Bringing the analysis of the two constraints together, the conclusions indicate that the pattern of accumulation could only be conducive to growth and redistribution insofar as either inflation rose or the balance-of-payments deteriorated, with unsustainable implications in the longer term. Importantly, these deep limitations of the pattern of accumulation were present from the very beginning, signalling that the seeds of the 2012-2015 downturn were laid during the 2003-2011 growth and redistribution period. At the bottom of these constraints was the incapacity of improving the country's productive structure, which indicates that a broader approach to industrial policy and a macroeconomic strategy that did not centrally rely on a low real exchange rate was needed. Based on the overall dynamics of the pattern of accumulation identified in this chapter, in the next chapter this thesis explores in further depth the redistribution of income that took place, analysing it in relation to growth and the regressive structural change.

6

Income inequality in Argentina under the Pink Tide: a macroeconomic-led redistribution

6.1. Introduction

Chapter 5 discussed how Argentina managed to maintain some of the world's fastest growth rates between 2003 and 2011, under Néstor and Cristina Kirchner's administrations (2003-2015), leading to a period of macroeconomic turbulence and falling GDP per capita from 2012 onwards. It proposed, at the sectoral and macroeconomic level, that growth and income redistribution were connected in a cumulative-causation process that led to a regressive structural change. It was shown how fast growth and wage gains pressured the balance-of-payments and raised inflation, accumulating fragilities that would eventually lead the economy and the distribution of income to stagnate after 2011. Even during the initial years with a strongly undervalued real exchange rate (2003-2008), the ongoing regressive structural change dynamics were not reversed, but only stalled, whilst step-wise rising inflation was a constant tendency from 2003 onwards. In this vein, the Kirchner's development strategy delivered growth and redistribution for nearly a decade, but proved

incapable of transforming the economy's constraints and sustain accumulation over the longer term.

This chapter takes a deeper look into the fall of inequality under the Kirchners, which, it is suggested, was a central pillar of the pattern of accumulation. According to many measures, there was a broad process of inclusion during their governments. From 2003 until 2014, the Gini index of household per capita income fell by around 0.110, unemployment was reduced from 14.4 to 6.9% and labour formalisation of low-skilled occupations increased by about 15 pp.[110] Furthermore, between 2003 and 2009 pension coverage increased from 66.9. to 88.6% of the population, and total government social spending rose from 13.0 to 20.6% of GDP (Lustig and Pessino 2014, Rossignolo 2016). Realising all of this in just over a decade was no mean feat, even if by 2014 the country was still much more unequal than in the not-too-distant past: illustratively, the Gini index was about 0.10 above what it had been in the early 1970s and the poverty rate four times higher, whilst labour informality stood around 10 pp above what it did in the early 1980s.[111]

The key question thus is what produced this intense, if somewhat short-lived process of redistribution, and why it was brought to an end as the decade turned. In order to do so, this chapter seeks to identify the drivers of income redistribution and looks into the class dimension of inequality in Argentina, applying different decompositions of household per capita income inequality and connecting the observed results to the key characteristics of the pattern of accumulation. In sequence, it explores the changing composition of household income, the incidence of different sources of income along the distribution, and how inequality was structured along and between class positions over the period. In doing so, a periodisation is proposed which can locate the key drivers of redistribution and how they were disabled.

This chapter is organised as follows. Section 6.2 uses an income-source decomposition of the Gini index to look at the changes of household per capita income between 2003 and 2014, discriminating between different kinds of labour income, capital income, pensions, and social security benefits. It shows that, at the aggregate level, the formal wages of low-skilled workers and pensions increased their share of total household income, at the expense of informal wages, professional salaries, and capital income. It also assesses the incidence of the different income-sources along the whole distribution, showing that between 2003 and 2011 the contribution of pensions and formal wages grew in the bottom of the distribution, whilst social security transfers decreased and became more targeted.

[110] Based on data from the EPH-C surveys.

[111] Poverty as the headcount rate living under US$ 4 per day (2011 PPP conversion factors). Poverty, inequality and informality data compiled by the SEDLAC database.

Section 6.3 then applies the ANOGI decomposition of the Gini index to household per capita income, with households classified according to class positions, to identify the class dimension of income redistribution and its drivers. The results indicate that between-class inequality fell much more sharply than inequality within class fractions, although the latter dimension also decreased. It is shown that two key drivers, closely connected to the regressive structural change, explained about half of the fall of inequality: the formalisation of low-skilled workers and the loss of relative income for professional workers. Other factors of relevance in reducing inequality were the decrease of unemployment and of the relative income of employers (particularly small employers), which suggests a heightening distributive conflict and, to some extent, a profit-squeeze.

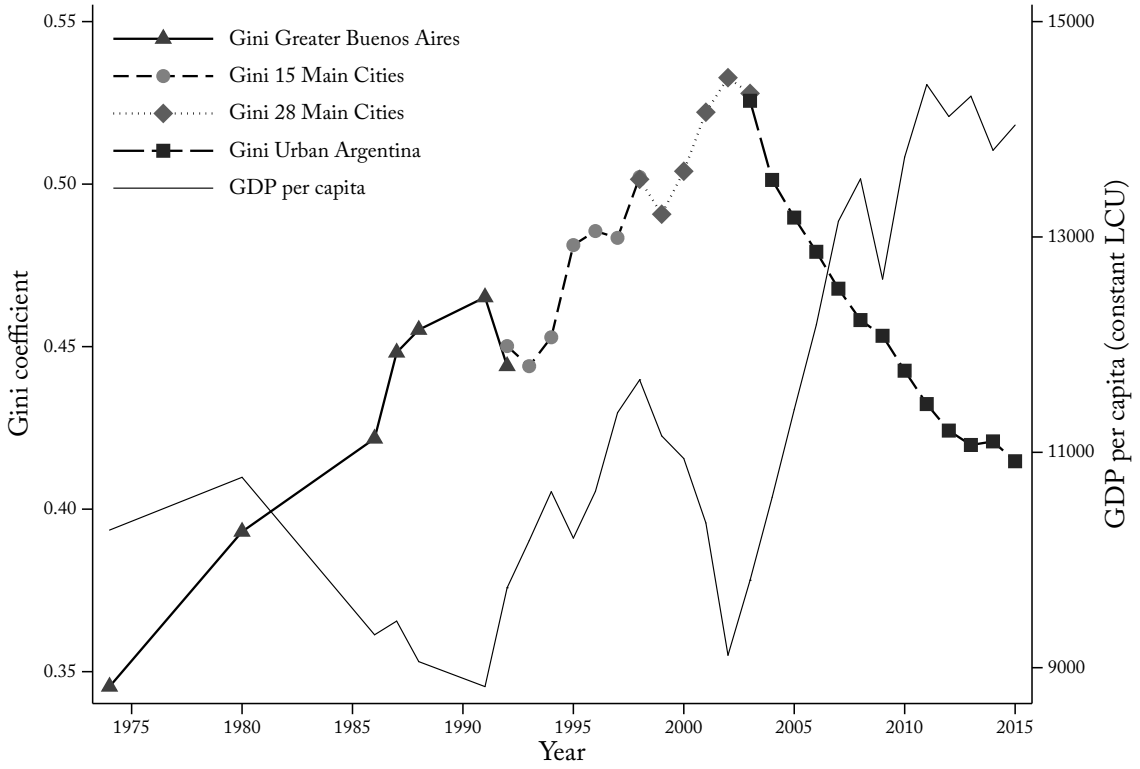
Section 6.4 brings the results of the preceding sections together and offers an interpretation of the dynamics of income redistribution under the Kirchners, in three stages: the crisis-recovery moment, from 2003 until the middle of 2006; the unfolding of the growth-redistribution-regressive structural change process, from mid-2006 until the end of 2011; and the breakdown, from 2012 until 2015. Section 6.5 concludes, highlighting that income redistribution was a deeply nested element of the pattern of accumulation during the Kirchner administrations: it was a macroeconomic-led equalisation process, with the implication that growth and redistribution would stand and fall together.

6.2. The changing composition of income: wages, capital income, pensions and social security benefits between 2003 and 2014

As Gasparini and Cruces (2008) have argued, the distribution of income in Argentina has been particularly volatile over the last four decades. As can be seen in Figure 6.1, the Gini coefficient of household per capita income rose very steeply from 1974 until 2002. It was 0.345 in 1974, a rather low value by Latin American standards (see chapter 1), and rose to 0.533 in 2002, although there were some smaller equalising sub-periods along the way. During the 2000s, this concentrating trend was reversed, as the Gini index fell by about 0.110 and reached 0.420 in 2012, before fluctuating around this level without a clear trend since then (for a discussion since Macri came to power in 2016, see Niedzwiecki and Pribble 2018). In comparative terms, the Kirchner administrations returned income inequality to roughly the same level it was in 1986, but this constituted, nevertheless, one of the largest equalisation processes ever recorded in Latin America. According to data from the World Bank (PovcalNet), only one Latin American country experienced a sharper fall in household per capita income inequality in the 21st century, and two had

comparable experiences: inequality fell by nearly 0.150 in Bolivia between 2002 and 2015, and by around 0.110 in Ecuador and El Salvador between 2000 and 2015 (see chapter 1).

Figure 6.1 Income inequality and GDP per capita in Argentina, 1974-2015



Notes: The Gini index refers to household per capita income inequality, calculated for different geographical coverages according to data availability.

Source: Prepared by the author based on data from SEDLAC (inequality) and the World Bank (GDP per capita, constant 2003 pesos).

In more detail, after a sharp hike during the military regime (1976-1983), inequality in Argentina experienced a steady upwards drift until 2002, punctuated by further rises during economic crises, such as the hyperinflationary episode of 1989/1990. The deep drivers of the drift were economic liberalisation and trade integration, in a context of labour repression, low unionisation rates and scarce social safety nets (Damill *et al.* 2003, Gasparini and Cruces 2008). With the introduction of the 'convertibility' regime in the beginning of the 1990s, changes in the productive structure and deindustrialisation followed, which decreased employment rates in general, and the demand for low-skilled labour in particular, with negative distributive effects (see chapter 5 and Alvaredo *et al.* 2018). This regressive structural change that occurred in the 1990s and the low-growth scenario of the decade also led to rising labour informality and higher skills premia, further aggravating inequality, whilst the social security matrix in place had low coverage rates (Galiani *et al.* 2017, Judzik *et al.* 2017, Tornaroli *et al.* 2014).

After the sharp rise in inequality and destitution that came with the 1999-2002 crisis, however, a novel and socially progressive pattern established itself: the period between 2003 and 2011 was the only one in the past four decades during which inequality fell whilst GDP per capita was growing (for a regional take on the process, see Cornia 2014b). The literature studying this redistribution of income highlights primarily the progressive role of falling higher-education premia, seconded by pension reforms (Alvaredo *et al.* 2018, Galiani *et al.* 2017, Lustig *et al.* 2013), although some attention has recently been devoted to labour formalisation as well (Beccaria *et al.* 2014, Maurizio 2014, Tornaroli *et al.* 2014). Rising MWs also played an equalising role, supported by strong labour mobilisation and collective bargaining (Maurizio and Vázquez 2016). Whilst several cash transfer schemes have been introduced in Argentina, which have been extensively analysed (Alperin 2007, Garganta and Gasparini 2015, Gasparini and Cruces 2010, Neffa 2009), there is strong evidence that, in comparison with other Latin American countries, they had a lower impact in the redistribution that occurred since 2003, although they were relevant during certain spells (Azevedo *et al.* 2013, Judzik *et al.* 2017). There has been, however, much less attention paid to the sustainability of this labour-market-led process of redistribution, unless from the perspective of the fiscal costs associated to certain policies (Lustig and Pessino 2014),[112] and its class dimension is mostly disregarded in the specialised inequality literature.

Before detailing these redistributive processes with a view to identifying their drivers and class dimensions, a brief discussion of the data sources is in order. The main database used throughout this chapter are the Argentinean EPH-C. They are the main official household surveys in Argentina, conducted by the National Statistics and Censuses Office (*Insitituto Nacional de Estadísticas y Censos*, INDEC), and underpin most of the inequality literature that concerns the country. They were first instituted in 1974, restricted to the Greater Buenos Aires region, and they were reformulated throughout the decades with different and increasingly comprehensive designs – leading, amongst others, to greater geographical coverage. The last major reformulation occurred in the third quarter of 2003, with two main implications. First, they began to sample all of the urban settlements of Argentina, equivalent to approximately 60% of the population. Second, they changed sampling weights and implemented a rotating panel scheme, with surveys carried out at a quarterly basis (INDEC 2009). Gasparini and Cruces (2008) show that there are no substantial differences in aggregate inequality indices when measured in the Greater Buenos Aires region or in more comprehensive spaces, such as urban Argentina, a result which allows for the longer trends presented in Figure 6.1. Nevertheless, these methodological changes

[112] See Cornia (2014b) for an important exception.

are likely to impact decompositions of inequality indices, and thus prevent conducting the detailed studies of this chapter for a period extending before 2003.

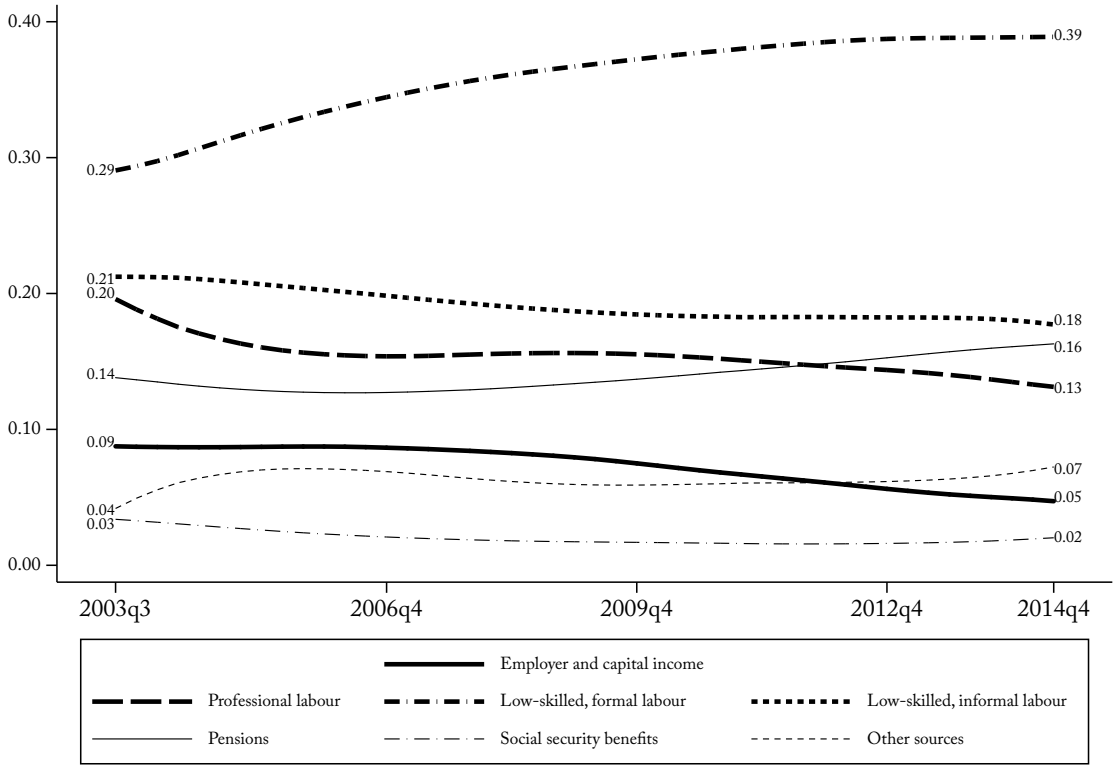
There are two further important considerations about the quality of the information present in the EPH-C, the first of which regards the impact of inflation on the dispersion of measured incomes. Data for the EPH-C are gathered along a quarter, with different regions sampled in different weeks. The onset of high inflation rates, which rose above 10% quarter-on-quarter during certain periods (see chapter 5), added a degree of noise to all national estimates of monetary values. Without knowing whether regions with lower average incomes were sampled earlier or later in the quarter, it is not possible to ascertain the presence of a bias in national inequality measures, but higher inflation did increase the uncertainty of the measures. These issues are explored in greater detail later in the chapter, but the results suggest that they are not major concerns.

More problematic, however, is the survey's (in)capacity of capturing top incomes, particularly capital income. This is, of course, an issue common to all household surveys, given the usual difficulties related to greater chances of non-response amongst higher-income households, special procedures needed to sample small populations and related issues (Alvaredo 2011, Burkhauser *et al.* 2012, Leigh 2007). Without an alternative data source to estimate this underreporting of top incomes, what can be done is to explore the evidence of its presence and take it into account when analysing the results. On this regard, usually around five to ten individuals in each quarter declared they employed 100 or more employees, and around 80 declared they employed more than ten workers. Of the 47 quarterly editions of the survey that were used, 27 had no respondents whatsoever who declared they employed 500 or more workers, and in only two editions were there three observations in this category (the maximum observed). The household per capita income these employers of 500 or more workers declared was, furthermore, highly incompatible with what is expected from this position, as it sometimes was very close to the average per capita income. Other forms of capital income were also likely to have been severely underreported, such as income derived from financial assets, real estate rents, and businesses in which the individual did not work. The *maximum* value declared for the sum of these three sources was, in ten editions of the survey, below ten times the average wage of a low-skilled worker, and only once was it above 100 low-skilled wages. In sum, there is strong evidence of severe underreporting of top incomes, particularly capital-derived income, which must be borne in mind when analysing the results.

With these caveats in mind, Figure 6.2 reports the changing composition of national income in Argentina, between 2003 and 2014 (see also Table A5.1). It should be noted, as explained in chapter 2, that the information presented in Figure 6.2 regards the shares

of income-sources in total national income, and not the income of households classified according to class positions, which is explored later in the chapter. The information in Figure 6.2 provides a first broad look into the determinants of the income distribution, which is then sequentially deepened by exploring the concentration of income-sources relative to total household per capita income over time, in Figure 6.3, and how these income-sources were distributed across the percentiles of the distribution, in Figure 6.4 and Figure 6.5.

Figure 6.2 Shares of different income-sources in total household income Argentina, 2003q3-2014q4



Notes: Lowess smoothing applied. Employer and capital income includes income derived from financial assets, from real estate rents, and from businesses in which the individual did not work; pensions include private and public pensions; social security benefits include employment-severance benefits, unemployment benefits, other forms of monetary subsidies or benefits, studentship stipends, and the labour income of those who are beneficiaries of PJyJHD; other sources include donations, in-kind transfers, and other forms of income not included above.

Source: Prepared by the author based on data from the EPH-C.

By far, the main change during the analysed period was the rise of the wages of low-skilled, formal workers, which increased by 10 pp from 2003 until 2014 (for a comparison with regional trends, see Tornaroli *et al.* 2014). The rise of the number of formal, low-skilled jobs, from approximately 2,000,000 in 2003 to around 4,300,000 in 2011 (data from the EPH-C),[113] made the income-share of formal wages rise from 31 to 38% of

[113] See chapter 5 for the differences between data from EPH-C and from national accounts, mostly related to their geographical coverage. In any case, although the point-values are rather different, their trends are broadly similar.

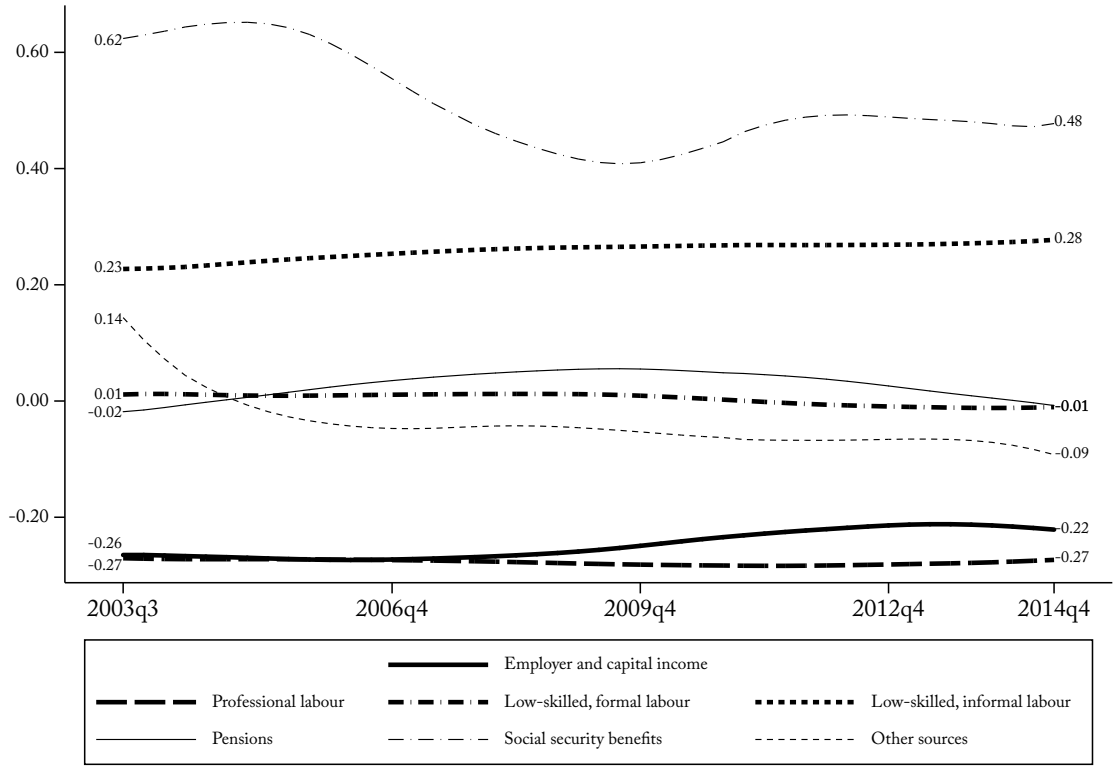
total household income by the end of 2011. After this moment, the share of formal wages fluctuated without a clear trend, coinciding with the stagnation of the overall distribution and a much smaller net creation of new formal, low-skilled posts (around 100,000 per year). The wages of informal, low-skilled workers, in turn decreased from 21% of total household income, in 2003, to 18%, in 2014. During this period, the number of informal workers was roughly constant, at 4,200,000, but they became a much smaller share of all low-skilled workers (from about 64 to 48%) and of all occupied individuals (from about 40 to 36%). It should also be noticed that the overall share of labour income – the sum of professional and low-skilled labour, regardless of formalisation – was mostly stable, around 70%.

Pensions also experienced a sustained, if smaller rise, going from 14 to 16% of total income between 2006 and 2014. The main reason for this was the introduction of a non-contributory pension system known as Moratorium (*Moratoria Previsional*), first through a temporary act in 2005 and then institutionalised via the Retirement and Mobility Act of 2008 (Lustig and Pessino 2014). Moratorium provides a monetary income for the elderly (women over 60 and men over 65) that had not contributed sufficiently to the regular pension system, who are a population in a situation of vulnerability with a strong association to having held informal occupations or part-time employment. Hence, this was an active strategy to combat old-age poverty, with a further gendered dimension, which had relevant effects on overall inequality – the evolution of this source's progressivity index is discussed below – and on social security coverage rates (see also Judzik *et al.* 2017).

The income-share that decreased the most was the remuneration of professional workers, which went from 20 to 13% between 2003 and 2014 (similar to other experiences in the region, as discussed in Galiani *et al.* 2017). Capital income also fell substantially from the late 2000s onwards, going from 9% in 2008 to 5% in 2014. With regards to the wages of professional workers, their share fell until the end of 2005, then remained flat until the end of 2009, and finally fell again until 2014. In the first of these three periods, the decline was most likely due to job losses, as some 200,000 professional posts were destroyed in net terms between 2003 and the end of 2005 (20% of the total that existed in 2003), whereas from 2006 onwards the deepening regressive structural change of the economy was the main reason, through its impact on the number and quality of jobs (this is explored in section 6.3). As for the decrease of the share of capital income after 2008, there is much more uncertainty given the underreporting of this source of income in the EPH-Cs, but the main candidate is the appreciation of the currency after 2008, through its decrease of the profitability and foreign competitiveness of domestic firms, and a profit-squeeze

caused by overall rising wages (the relative income of large and small employers also decreased between 2005 and 2011, as discussed in section 6.3).

Figure 6.3 Progressivity (overall Gini minus concentration index) of different income-sources relative to total household per capita income in Argentina, 2003q3-2014q4



Notes: Lowess smoothing applied. Positive values indicate the income-source is concentrated in relation to overall household per capita income. See notes to Figure 6.2.

Source: Prepared by the author based on data from the EPH-C.

Figure 6.3 in turn brings the progressivity index of the income-sources, revealing an image of substantial continuity for several sources (see also Table A5.2). As explained in chapter 2, the progressivity index is the concentration index of an income-source (measured in relation to overall household per capita income) minus the Gini index of the whole distribution, so it is negative for relatively concentrated sources and vice-versa. In light of the decline of inequality during the analysed period, the stability of the progressivity indices means most income-sources became more equally distributed at the same pace that total per capita income did (i.e. their concentration index moved together with the overall Gini index). In other words, the distribution of the several sources moved in tandem, without any of them taking clear temporal precedence or experiencing significantly different swings. In this vein, it is worth highlighting that pensions,[114] professional wages,

[114] Further research is required to understand why the progressivity of pensions inverted its trend between 2003 and 2014, as it went from about -0.02 in 2003, up to about 0.05 in 2009 and then fell once more to reach approximately -0.01 in 2014. This is in spite of the introduction of non-contributory pensions and changes to the contributory element of pensions around 2008, which had an important equalising effect (Lustig and Pessino 2014).

and formal, low-skilled wages had their progressivity essentially unchanged during the period, in spite of considerable variations in their income-shares. The higher progressivity of informal wages, in turn, means that the income associated to this form of employment became increasingly associated to the bottom of the distribution.

The main exception to the stability of the progressivity indices regards social security benefits, which can be explained by the changing social policy mix. There were two main issues in this regard, the dismantling of PJyJHD and the introduction of AUH, the two major CCT schemes of the period (for the programmes details, see chapter 5 and Gasparini and Cruces 2010, Neffa 2009). Although there is some uncertainty in precisely identifying the income that comes from these sources, given the lack of specific question in the EPH-C to allow for that, some conclusions can be safely drawn. PJyJHD transfers decreased from 2003 until 2009 (see chapter 5 and Neffa 2009), which reduced the progressivity of overall social security transfers given that PJyJHD was very targeted to low-income families (Gertel *et al.* 2008). Therefore, the progressivity of social security benefits decreased from about 0.60, in 2003, to about 0.40, in 2008. The second important process was the introduction of AUH in 2009, increasing the overall resources transferred and making them more progressive (Garganta and Gasparini 2015, Gasparini and Cruces 2010). Through this, social security benefits reached a progressivity index of 0.48 in 2014. It should be noted that, although benefits were a very small source of income in the aggregate (about 2%, as seen in Figure 6.2), they were by far the most equalising one, with important implications for poverty alleviation (Lustig and Pessino 2014, Lustig *et al.* 2014).

In sum, *at the aggregate level the main process under the Kirchner administrations was the greater share of formal, low-skilled wages*, particularly until 2010. This occurred alongside a smaller increase of pensions, compensated for by a decrease of professional wages and, to a lesser extent, capital income. Meanwhile, the concentration of most income-sources evolved at the same pace of that of the overall distribution, without any source taking a clear lead in this dimension. The exception were social security benefits, whose progressivity decreased as PJyJHD transfers lost real value and then recovered with the introduction of the AUH programme, but their share of total income was not large enough to drive the whole distribution.

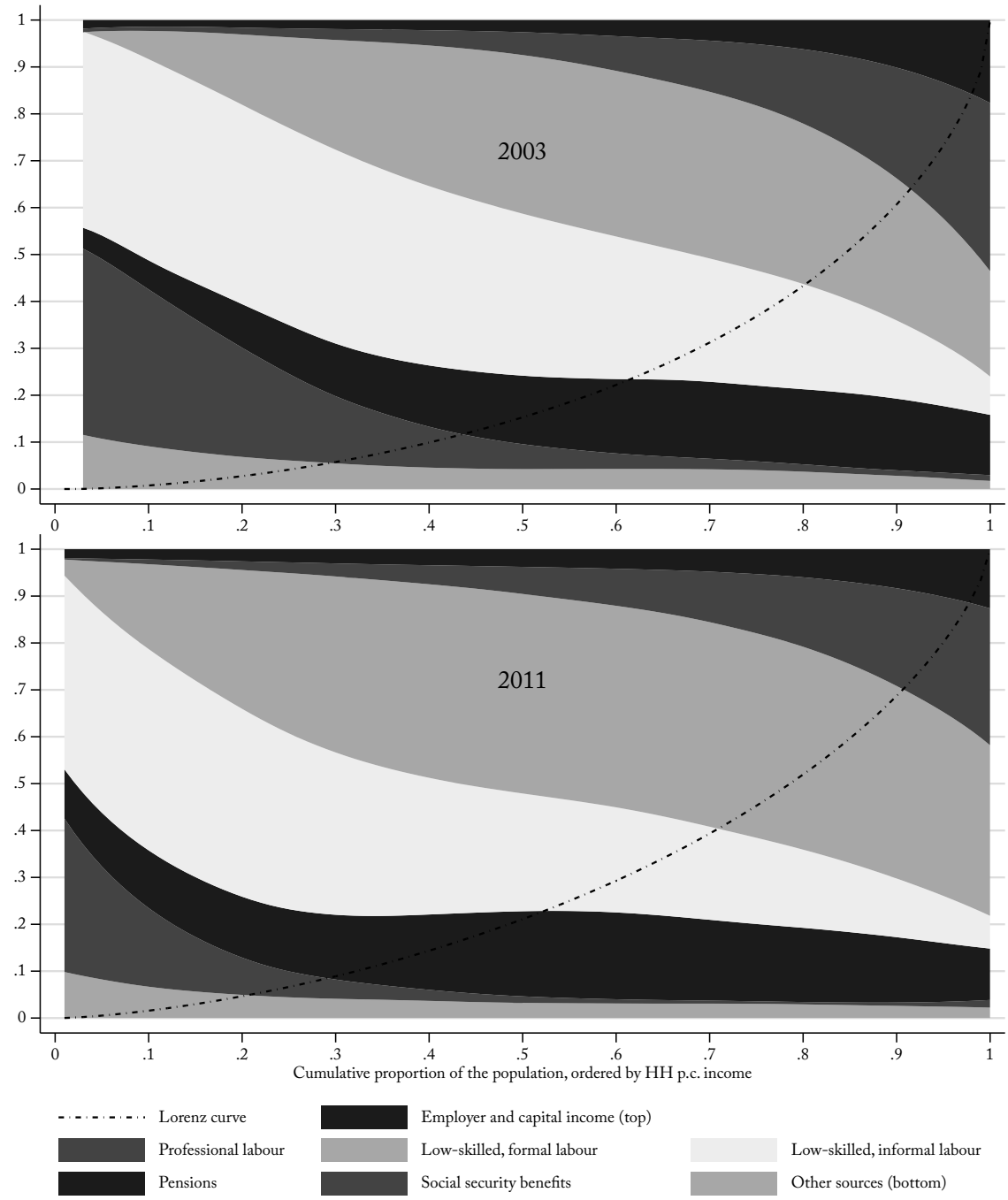
Figure 6.4 and Figure 6.5 provide more detail into how the income-sources evolved over time, by looking into the presence of the different sources along the whole distribution for selected years (2003, 2011 and 2014). In general terms, the data are as expected: there is a clear hierarchy of income-sources, and over time the main process was a substantial, if not by any means complete, formalisation of low-skilled labour. Social security benefits

had a strong contribution to the lowest-income households, soon giving way along the distribution to informal, low-skilled wages and then their formal counterpart. Capital income and particularly professional salaries were at the top, although the ordering of these two sources of income should be taken with a grain of salt in light of the data deficiencies discussed above. Pensions, in turn, were somewhat evenly spread throughout the distribution, with a concentration in the middling positions. Finally, it should be noticed that the smoothing procedures applied to build the figures obscure a considerable break in the top percentile, as the share of capital income approximately doubled with regards to the one-before-last percentile (households between 98 and 99% of the distribution).

One of the most relevant points that can be seen in Figure 6.4 was the weight of social security benefits amongst the bottom 30% of the distribution in 2003. Although a strict comparison with the pre-2003 period cannot be made due to data constraints, Judzik *et al.* (2017) present evidence that social security transfers became considerably better distributed: the authors' calculations indicate a decrease of nearly 0.30 in the concentration index of benefits from 2002 to 2003. Gertel *et al.* (2008) using 2002 data also estimate that the introduction of PJyJHD might have reduced the Gini index by around 0.02. It is thus safe to conclude that PJyJHD played a major role in tackling the most acute situations of destitution in the aftermath of the 1999-2002 crisis. Nevertheless, 2% of households had no declared income in 2003, which shows the levels of destitution the country reached during this period. Moreover, the top decile received nearly 40% of total income, whilst the bottom one received less than 1%.

The second important element regards the role of formal and informal low-skilled wages. In 2003, it was really only in the top half of the distribution that formal, low-skilled wages became a central element of household income, whilst informal wages had a sizeable presence at most points. This was a consequence of the process through which Argentina integrated itself into the global economy during the 1990s (see chapter 5), with economic deregulation, labour flexibility and the rigidity of the convertibility regime producing adverse impacts on the labour market, aggravated by the 1999-2002 crisis (Damill *et al.* 2003). The literature indicates that similar (even if less pronounced) outcomes obtained throughout Latin America (Bogliaccini 2013, Portes and Hoffman 2003, Robinson 2008, Tornaroli *et al.* 2014). This was, therefore, very much a pattern of accumulation based on reproducing informal labour relations and unemployment for the vast majority, and a select few positions of privilege for professional workers and capitalists at the top decile. In this vein, it is relevant that the top percentile captured about 10% of total national income, two thirds of which comprised capital income and professional salaries.

Figure 6.4 Shares of different sources of income along percentiles of the distribution of household per capita income in Argentina, 2003 and 2011



Notes: Lowess smoothing applied. The first two percentiles had null income, hence no income-sources are displayed. The values for 2003 are the average for the two final quarters of the year, and for 2011 the values are the average of the four quarters. See notes to Figure 6.2.

Source: Prepared by the author based on data from EPH-C.

This scenario was altered between 2003 and 2011, as the conditions of high unemployment, high informality, and high wage premia for professional workers were reduced. PJyJHD, later substituted by AUH, provided some relief to those in the most acute conditions of destitution (Garganta and Gasparini 2015, Neffa 2009), the MW nearly tripled in real

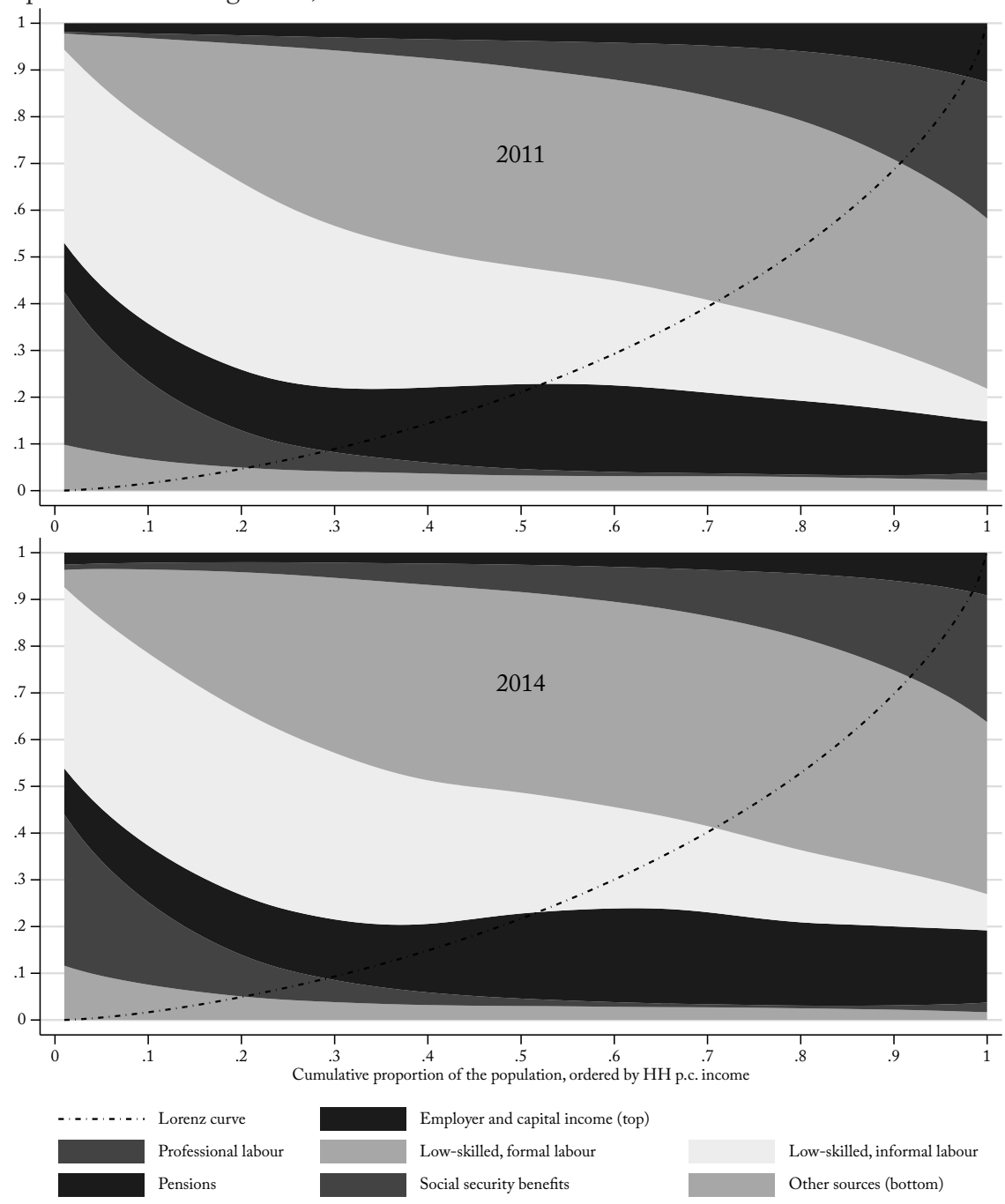
terms between 2003 and 2006 (deflated by Pricestat) and had a positive distributive impact (Maurizio and Vázquez 2016), reforms to the contributory and non-contributory pension system were introduced (Lustig and Pessino 2014), and higher demand for low-skilled workers decreased skills premia (Galiani *et al.* 2017). With a fall of the Gini index of around 0.100 between 2003 and 2011, not only did household per capita income become more equally distributed, but the incidence of its main sources along the distribution also shifted substantially.

The two major changes that can be seen by comparing 2003 and 2011 refer to social security benefits and low-skilled labour formalisation. With regards to the former, it can be seen how they became much more targeted to those in the bottom decile of the distribution, whilst also representing a considerably smaller proportion of income for most households. In this vein, Lustig and Pessino (2014) indicate that between 2003 and 2009 cash transfers (excluding non-contributory pensions) as a share of GDP decreased by 0.5 pp, even after the introduction of AUH, with muted effects on overall inequality. In parts, this was the result of the recovery from the crisis, with employment-creation and wage gains making labour-market income rise faster than social security benefits, which were designed to alleviate poverty. Nevertheless, that for households at the first decile of the distribution benefits only represented about 10% of total income, and a negligible amount for those above the second decile, shows a social security matrix with strong levels of targeting and means-testing with regards to its income-supporting dimension.[115]

The main change throughout the distribution, however, was the substantial rise of formal, low-skilled wages. In 2011, for households from the third to the ninth decile, formal wages became the most important source of income. They represented a fairly stable share of total income at several points of the distribution, around 40%, gradually giving space to professional salaries, capital income and, to an extent, pensions. Importantly, the higher share of formal wages was driven by formalisation, as opposed to changes in the wage ratio of formal to informal low-skilled workers: whereas in 2003 there were nearly twice as many informal workers, in 2011 their numbers were roughly equal, whilst relative wages were reasonably stable at twice the average for formal workers (although with slight relative gains for informal workers). Low-skilled labour formalisation had a progressive impact, which is explored in section 6.3.

[115] Lustig and Pessiono (2014) analyse other forms of in-kind government transfers, including free or subsidised education and health, which were enjoyed by a greater proportion of the population whilst still being progressive.

Figure 6.5 Shares of different income-sources along the distribution of household per capita income in Argentina, 2011 and 2014



Notes: Lowess smoothing applied. The first two percentiles had null income, hence no income-sources are displayed. The values are the average for the four quarters of 2014. See notes to Figure 6.2.
Source: Prepared by the author based on data from EPH-C.

Between 2011 and 2014, on the other hand, the distribution essentially stagnated, as seen through Figure 6.5. The top ten percent of the population continued to capture around 30% of total income over these years (down from almost 40% a decade earlier), and the presence of different income-sources along the distribution did not undergo substantial transformations. The main changes were the decrease of capital income in lieu of pensions,

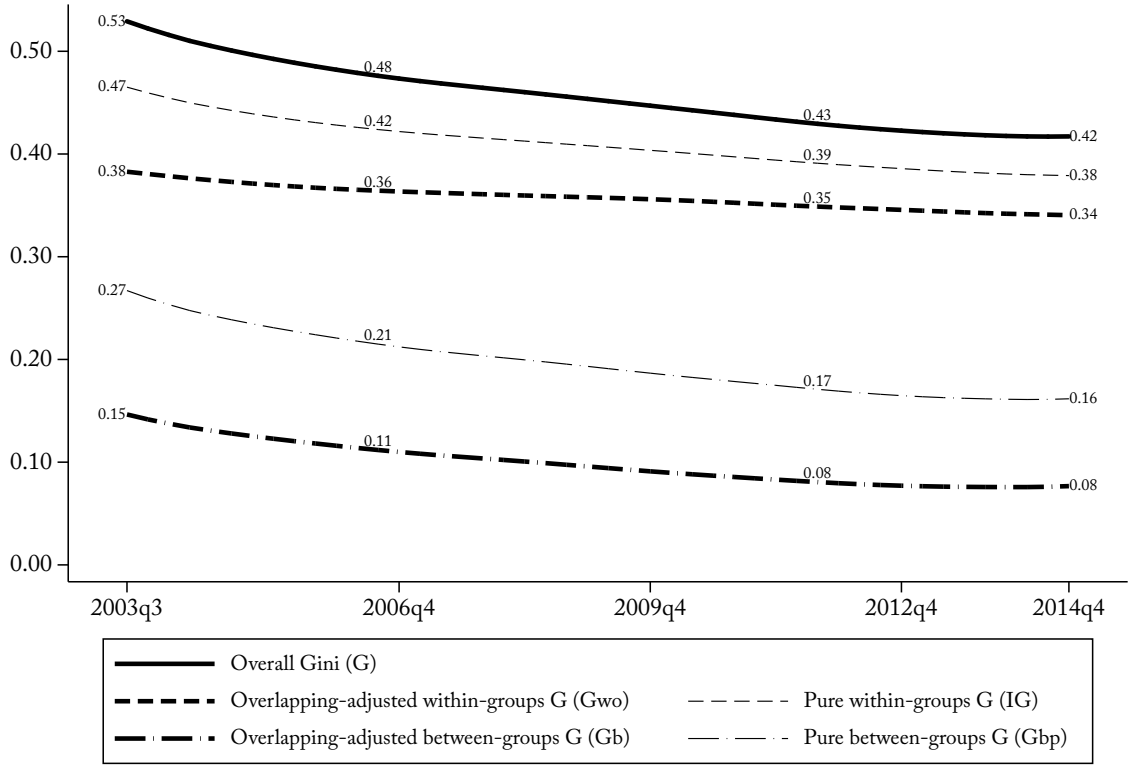
in the top half of the distribution, and a further slight formalisation of low-skilled workers in the bottom half. Otherwise, households at different points of the distribution were mostly unchanged. To explain this stagnation of redistribution after 2011, the next session explores the class dimension of inequality, identifying with more precision the drivers of redistribution and how they ceased to operate from 2012 onwards.

6.3. Class inequality under the Kirchners: the centrality of low-skilled labour formalisation and of the relative devaluation of professional labour

The previous section explored how the distribution of income changed in Argentina between 2003 and 2014, from the perspective of income-sources. It looked into the seven major sources of income, analysing their shares, their progressivity and their contribution to household incomes along the whole distribution. The main observed change was the greater presence of formal, low-skilled wages, in lieu of their informal counterpart, driven by labour formalisation and intense job creation during the 2003-2011 boom. Another result was that the different income-sources – particularly those responsible for a larger share of total national income – did not change their progressivity indices to a large extent, but rather became less concentrated at the same pace as the overall distribution did.

To identify with more precision the drivers of income redistribution under the Kirchner governments, this section decomposes the distribution of income according to the class positions of households. It is shown that the main driver of redistribution was a decrease in inequality between class fractions, which also led to lower levels of stratification along class lines. Inequality within class fractions decreased as well and did have a substantial overall impact, but this equalising effect was much smaller than that of between-class inequality. This section also measures the impact on inequality of low-skilled labour formalisation and of the relative decrease of professional workers' income, to conclude that these were the key equalising phenomena between 2003 and 2014. Finally, this section proposes a periodisation of income redistribution under the Kirchners, with three periods, whose dynamics are related to the exit from the crisis from 2003 until 2006, to the cumulative-causation and regressive structural change process from 2006 until 2011, and to the breakdown of the pattern of accumulation from 2012 until 2015.

Figure 6.6 Household per capita income inequality in Argentina, ANOGI decomposition by class positions, 2003q3-2014q4



Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Values shown for 2003q3, 2006q3, 2011q4 and 2014q4.

Source: Prepared by the author based on data from EPH-C.

Figure 6.6 (see also Table A5.4) brings the overall results of the ANOGI decomposition, showing that income redistribution extended across the between- and within-class dimensions, but was more intense between class fractions. In fact, between the third quarter of 2003 and the last of 2014, the coefficient of within-class inequality fell by 0.040 and of between-class inequality fell by 0.070. Income redistribution also reduced stratification along class lines, which can be seen by how the overlapping-adjusted between-groups component, G_B, decreased in relation to the pure between-groups component, G_{BP}: their ratio went from about 0.54 in 2003 to about 0.47 in 2014 (as explained in chapter 2, when there is perfect stratification G_B equals G_{BP}, and they grow apart as overlapping increases). Essentially, this greater overlapping means that to a larger extent different classes came to share the same space in the distribution of income.[116]

[116] It is possible that higher inflation rates might have artificially raised overlapping, given that the interviewing period over the course of a quarter creates some noise. In order to assess the impact different interview periods might have had on estimates of overlapping and inequality, some tests were made using only observations for the Greater Buenos Aires region (which is sampled in the same week). Overall inequality is substantially the same when compared to the national estimates, whereas the between-groups element and stratification are relatively larger, though only by a few percentage points. This, of course, cannot discriminate between the putative effects present in the whole sample due to different interview periods under high-inflation scenarios, on the one hand, and the effects due to substantive differences

Advancing on the tentative periodisation identified in the previous section, this scenario of falling inequality and stratification can be approached in three periods. They are roughly as follows: the most intense one, extending from 2003 until the second quarter of 2006; a second and less intense, but still intense period of redistribution, lasting from the third quarter of 2006 until the end of 2011; and a period when inequality virtually stagnated, from 2012 until the end of 2014. The first two were driven by the between-class dimension, and the third, to the extent that there was a change, by the within-class component. In the first, the Gini index fell on average by 0.0053 per quarter, 0.0034 of which refer to between-class inequality. In the second, the average decrease of the Gini index was of 0.0023 per quarter, as inequality between classes fell on average by 0.0017 per quarter. Finally, the third period does not present a statistically significant trend in total inequality or its between-class dimension, although there is some evidence of a very slight decrease in inequality within class fractions (of 0.0005 per quarter, although only significant at a confidence level of 10%).

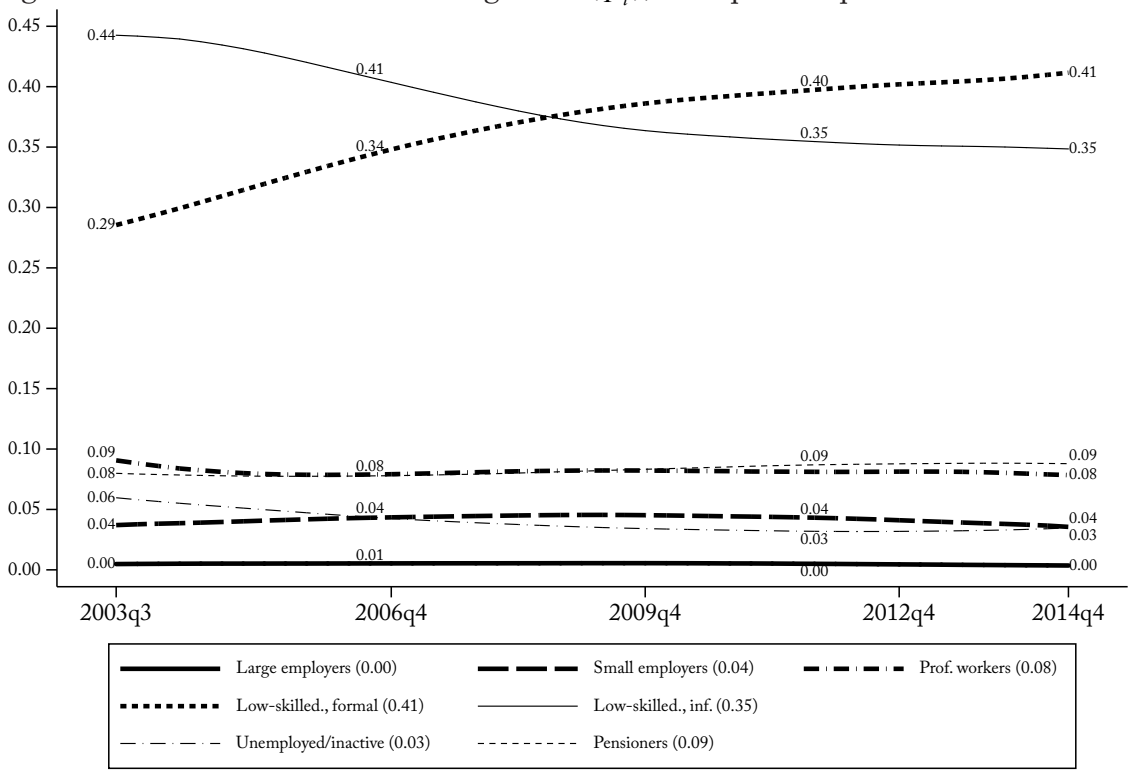
In light of this periodisation, the central question is to identify the processes that made inequality between classes fall until 2011 and then ceased to be operative, complemented by an examination of the drivers of lower within-class inequality. It is particularly important to identify which relations – and between which fractions – were the key ones driving redistribution, thus allowing for a connection to be established with the dynamics of the pattern of accumulation presented in the previous chapter. To this extent, Figure 6.7 through Figure 6.13 look at the individual elements of the ANOGI decomposition for each class fraction, with separate measurements of the impact on inequality of their changing sizes and relative income (see also Table A5.5).

Figure 6.7 brings the evolution of the size of class fractions in Argentina between 2003 and 2014, reinforcing a central argument of the current interpretation: the main change was a massive transition from informal to formal low-skilled occupations. Over the whole period, the share of formal workers' households increased from 29 to 41%, whilst informal workers fell from 44 to 35%. The difference between these two movements is accounted for by the decrease of unemployed or inactive households, whose share of the population fell from 6 to 3% between 2003 and 2014. Closely following the periodisation proposed above, these processes of labour formalisation and employment-creation were stronger in the initial three years, slowed down until the end of 2011, and then tapered off. Supporting this periodisation, national accounts data indicate that nearly double the net jobs were created in the first as compared to the second period, with barely none in the third. The other changes to the sizes of class fractions were much less significant, comprising a 1 pp

between Greater Buenos Aires and the rest of the urban areas, on the other. Nevertheless, it is evidence that the decrease of stratification might have been overestimated, but only by small margins.

increase in the size of pensioners, most likely associated to demographic changes and the introduction of the non-contributory pension scheme in 2008, and a similar decrease in the size of professional workers.

Figure 6.7 Size of class fractions in Argentina (p_i), 2003q3-2014q4

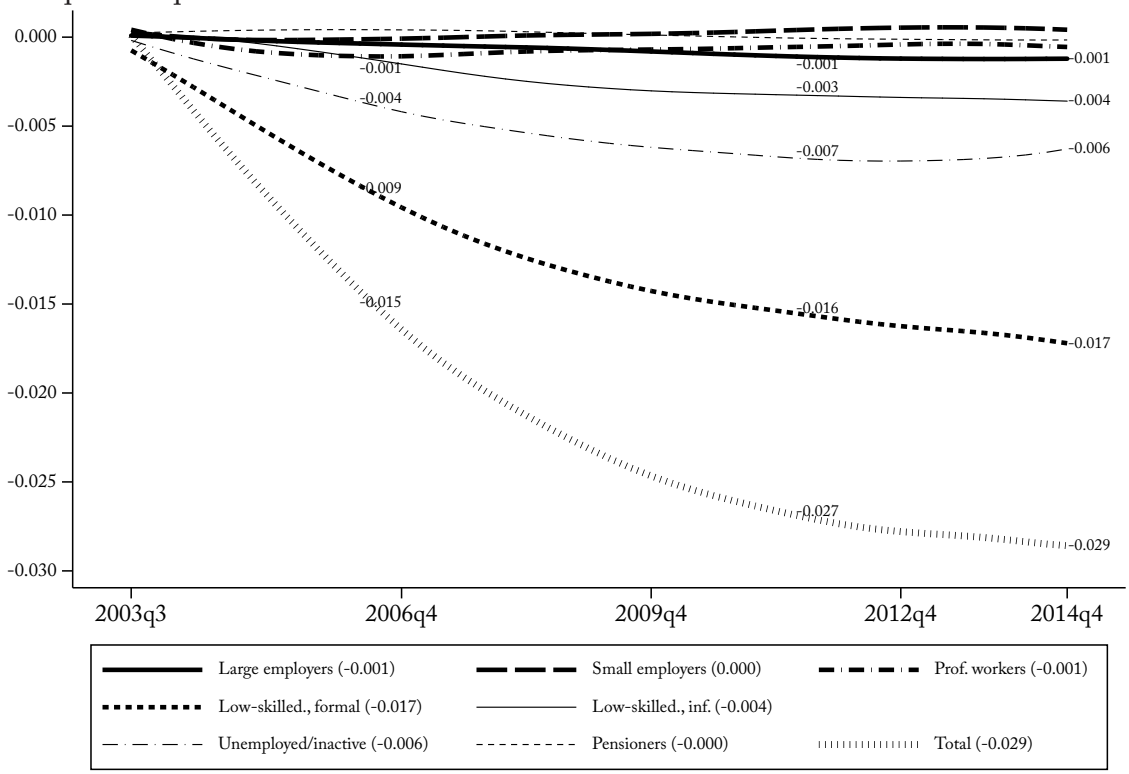


Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Values shown for 2003q3, 2006q3, 2011q4 and 2014q4. Final values shown in the legend after the identification of the positions.

Source: Prepared by the author based on data from EPH-C.

In terms of the class structure of the economy, therefore, the key result of the initial decade of the 21st century was to stymie or partially reverse the (continent-wide) trend of labour precarisation and informality that was present since the mid-1980s and intensified in the 1990s (Tornaroli *et al.* 2014). This was undoubtedly a very important process of social mobility, given the large wage gaps between formal and informal low-skilled workers – formal, low-skilled households had nearly double the average per capita income than their informal counterpart, as shown in Figure 6.9 – and that important social security benefits were associated to being in formal employment, particularly the right to a pension and health insurance. Nevertheless, it should be noted that in 2014 Argentina was still far from the more equal situation of previous decades, as labour formality data compiled in the SEDLAC database indicate that the overall share of informal workers (i.e. without discriminating by occupational skill level) stood at the same level it did in the mid-1990s, around 33%, which was considerably higher than the 24% level registered in 1986.

Figure 6.8 Impact on inequality of changes in the size of class fractions in Argentina, 2003q3-2014q4



Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Values shown for 2006q3, 2011q4 and 2014q4.

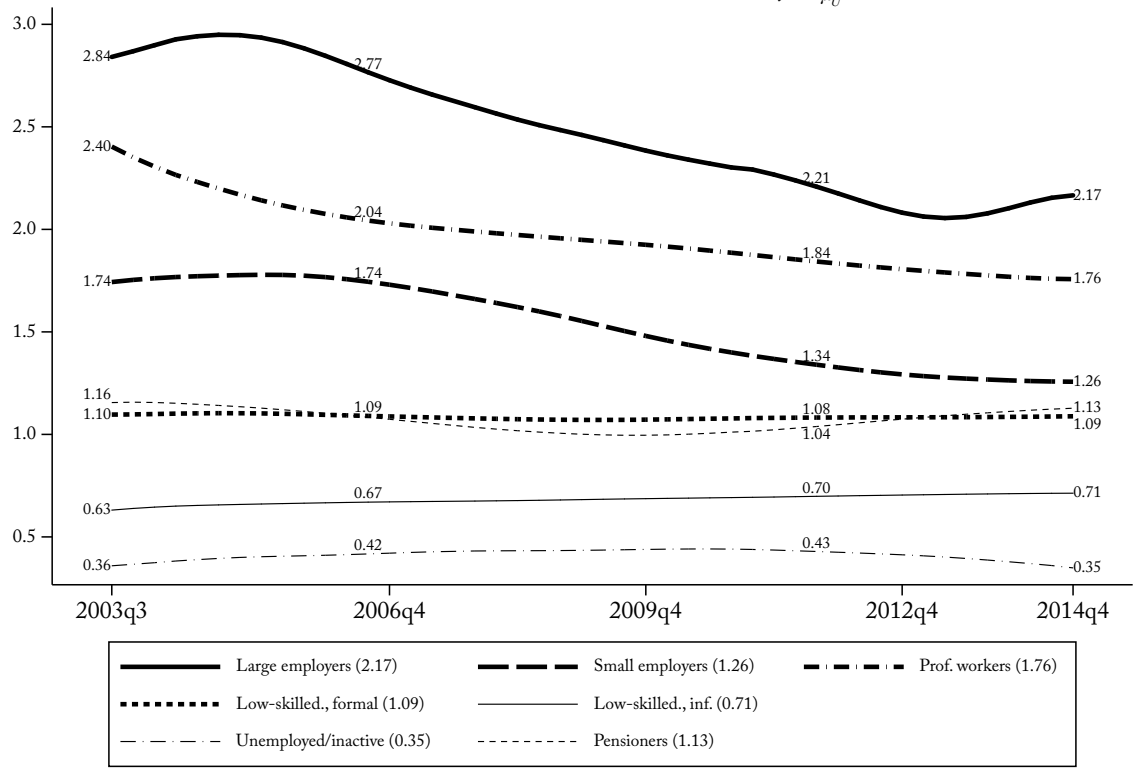
Source: Prepared by the author based on data from EPH-C.

Figure 6.8 measures the impact on inequality of changes in the size of class fractions, which altogether accounted for a decrease of 0.027 in the Gini index, about 27% of the total decrease of inequality during the period. The variations in the size of three class fractions – formal and informal low-skilled workers and the unemployed or inactive – accounted for the near totality of this effect. Low-skilled labour formalisation amounted to a decrease of 0.023, whilst the reduction of unemployment further reduced the Gini index by 0.006. All other changes were basically immaterial. Importantly, these progressive effects were much stronger until 2006 and had all ran their course by the end of 2011, signalling that one of the key pillars of the growth and redistribution pattern had broken down by 2012.

There are two reasons behind the deceleration and later stagnation of changes to size of class fractions as a driver of redistribution. First, as growth slowed down from 2007 onwards and then ground to a halt after 2011, the labour market became less heated, which led to labour formalisation and the decrease of unemployment also slowing pace and, after 2011, being interrupted. If this engine stopped, a different process was also underway that reduced the efficacy of labour formalisation as a driver of income redistribution, and one which was due to the very success of redistribution. Between 2003 and 2014, the expected impact on inequality of a 1 pp formalisation of low-skilled labour decreased

by about 40%, from a decrease of the Gini index of 0.0012 to one of 0.0007, because of the transformation of the shape of inequality during the period (particularly a smaller income gap between the two fractions, seen below). Which means that *the impact on inequality of labour formalisation diminished through its own success*, even if there was still a large contingent of informal workers that would stand to gain through formalisation.

Figure 6.9 Relative income of class fractions in Argentina ($\eta_i = \frac{\mu_i}{\mu_U}$), 2003q3-2014q4



Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Values shown for 2003q3, 2006q3, 2011q4 and 2014q4. Final values shown in the legend after the identification of the positions.

Source: Prepared by the author based on data from EPH-C.

Figure 6.9 in turn shows that changes to relative income – i.e. the mean household per capita income of a class fraction, divided by overall mean per capita household income – were much more widespread along the several groups than changes to the size of class fractions. Three relevant groups – professional workers and large and small employers – lost substantially in relative terms, albeit in different moments. The relative income of these three groups declined, as a proportion of their initial values, by about 25% from 2003 to 2014 (a decline of between 0.5 and 0.7 in units of average household per capita income), although clearly stabilising towards the end of the period. In absolute terms, this translated into a virtually stagnant real income for the three groups if the whole period is considered, although the timing of gains and losses varied slightly for the three groups.[117]

[117] This is calculated by using the real values of GDP per capita present in the latest national accounts, multiplied by the average relative per capita income of each class fraction.

The other fraction that experienced a substantial change in their relative income were informal, low-skilled workers, who gained about 13% as a proportion of their initial value, from a relative income of 0.63 to 0.71. This meant an increase of real per capita income of almost 60%.

Although all interpretations of the income of employers must be taken with a grain of salt, because of data deficiencies, it is likely that two factors operated with different intensities over time: variations of the real exchange rate, and a profit-squeeze through rising wages combined to slow productivity gains. From 2003 until 2008, the real exchange rate was kept at a depreciated level, increasing the profit-share of national income, whilst the level of economic activity grew rapidly using idle capacity as the economy left the doldrums of the 1999-2002 crisis (see chapter 5). Higher growth and foreign competitiveness in a context of labour market slack is likely to have increased profitability and the profit mass, and hence raised the income of employers. Meanwhile, the real MW wage more than doubled until 2006, after which it fluctuated with a slight downwards trend, whilst the formalisation of low-skilled labour and wage gains for informal workers proceeded at rapid pace until 2011 and then stagnated. As idle capacity became low and the labour market heated up, from around 2007 until 2011 this most likely squeezed the profitability and the income of employers to some extent.

The most relevant change for the overall distribution of income, however, refers to the opposite trends for the relative income of professional and of low-skilled workers (measurements of their impact on inequality are discussed below). The main reason behind these diverging trends was the regressive structural change, which implied a growing demand for low-skilled workers and a slow creation of professional jobs. If this did allow for redistribution, it is also worth mentioning that a decrease of wage premia for professional occupations based not on a strong equalisation of higher education, but rather on the weak creation of specialised, high-productivity positions, has negative implications for development over the longer term.

These results are in line with what Galiani *et al*. (2017) have found for Latin America during the 1990s and 2000s, which indicates that it was the *demand* for low-skilled workers (relative to high-skilled ones), and not their *supply*, which determined the trends of education premia (which rose in 1990s and decreased in the 2000s). Gasparini and Cruces (2008) and Azevedo *et al*. (2013) also present evidence in the same direction. Differently from these authors, however, who use education levels per se, the current analysis is based on workers' occupations, which are more closely related to the productive structure of the economy. Along these lines, a simple statistic strongly suggests how variations in the demand for high-skilled labour were the most relevant phenomenon during the 1990s

and 2000s: between 1991 and 2000, the share of workers with higher education increased by 26% of its initial value (from 20.0 to 25.8%), with education premia rising, whilst from 2003 until 2014 the share of workers with higher education rose by 20% of its initial value (from 26.5 to 31.8%), but education premia declined.[118]

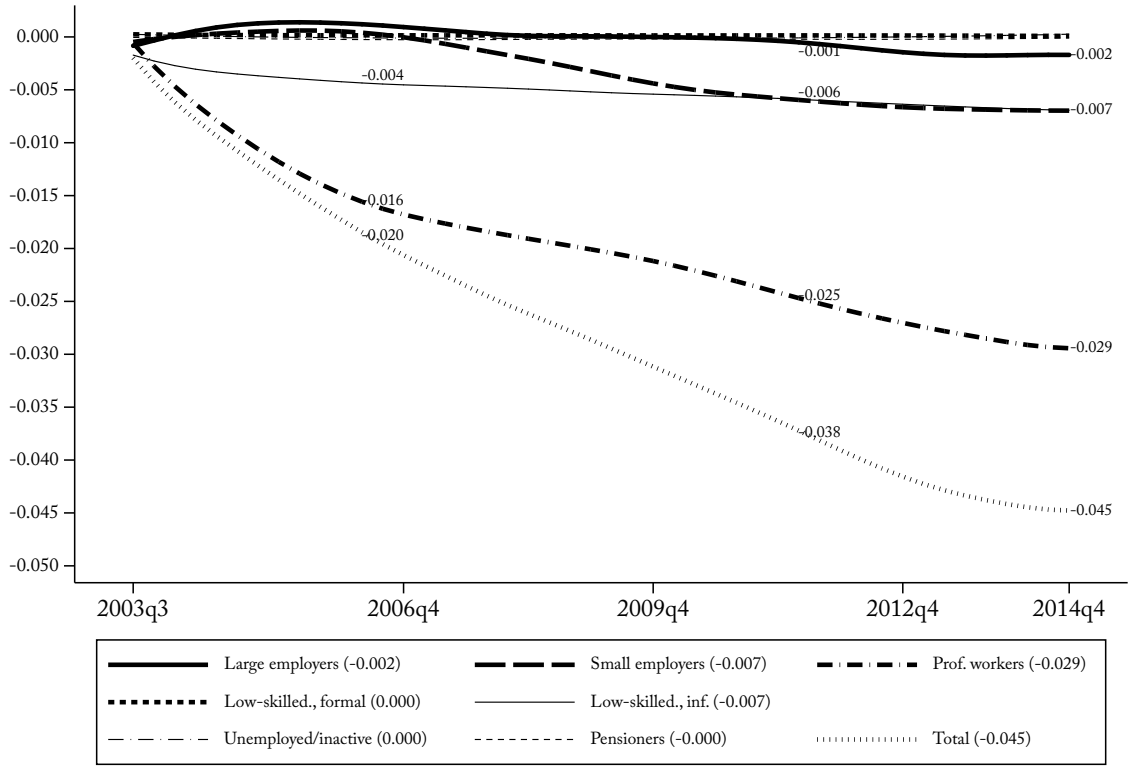
The cumulative-causation process, heating the low-skilled segments of the labour market and driving a regressive structural change, can therefore explain three phenomena. First, the already-mentioned formalisation of low-skilled employment, which led to gains for low-skilled workers as a whole given that formalisation is associated to direct and indirect wage gains (on the pro-cyclical nature of formalisation, see Maurizio 2014, Tornaroli *et al.* 2014). Second, that formal workers did not gain in relative terms despite the real MW having more than doubled from 2003 until 2006. The reason for this is that the jobs that were created were mostly created in lower-paid, lower-productivity sectors. Which is to say, there were opposing and roughly equal forces impacting the relative income of formal, low-skilled workers, which hence remained stable. Third, that professional workers lost so much, as they were in low demand. In other words, the pattern of accumulation inherently benefitted low-skilled workers, although within clear limits as it did not provide better quality jobs (on the precarious nature of the jobs created, see also Felder and Patroni 2018).

Finally, another important process that helps to explain why the income of low-skilled workers grew at a faster pace than that of other class fractions was the revitalisation of labour struggles after the Kirchners came to power (Bonnet 2012, Castorina 2013, Varela 2012, 2014). There were two main processes in this regard. First, the main trade union of the country, the CGT, got closer to the government and assumed a greater role in the ruling party, the PJ. This included, amongst others, participating in the tripartite negotiation forums that were reinstated in the Labour Ministry, which negotiated collective bargaining agreements with representatives from the state, business federations and trade unions (Bonnet and Piva 2012). Second, there was also an increase of grassroots organising, both in the CGT and through other trade unions that were more distant from the government, and this more independent stance increased from about 2010 onwards as rifts appeared between the government and CGT and between CGT and its base (Varela 2012). As a result of the greater role that trade unions played during the Kirchner governments, collective bargaining rose exponentially. From an average of less than 250 collective bargaining agreements registered per year during the 1990s, their number rose

[118] Data from the SEDLAC database, employment structure by education levels.

every year from 2004 until 2010, when there were about 2,000 collective agreements, and then stabilised with a slight downwards trend until 2015.[119]

Figure 6.10 Impact on inequality of changes in the relative income of class fractions in Argentina, 2003q3-2014q4



Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Values shown for 2006q3, 2011q4 and 2014q4.

Source: Prepared by the author based on data from EPH-C.

The impact on inequality of these changes in the relative income of class fractions is measured in Figure 6.10, revealing profoundly equalising implications. The total effect, a decrease of the Gini index of about 0.0045 from 2003 until 2014, accounted for slightly over 40% of the total fall of inequality over the period. By far the main phenomenon was the loss of relative income for professional workers, which alone accounted for a fall of 0.029 in inequality. Similar to other drivers of redistribution, the impact of lower relative income for professionals was concentrated in the first years, with more than half of its equalising effect having occurred by 2006. Professionals continued to lose relative income until 2014, however, most likely because the regressive structural change continued to take place until then. Lower relative income for small employers, particularly between 2008 and 2011, and higher relative income for informal workers, particularly in the first years, contributed each with a further decrease of the Gini index of 0.007.

[119] Data about the State of Collective Negotiations, from the Ministry of Labour.

At this point, it is possible to discuss a common problem in the inequality literature which the methods developed in this thesis help to redress. In order to determine the impact of labour formalisation on inequality, several authors (e.g. Amarante 2016, Judzik *et al.* 2017, Keifman and Maurizio 2012, 2014) have used an income-source decomposition of the Gini index similar to that of section 6.2. Although details vary in each study, the basic methodology is the same: they distinguish between different income-sources and, through the formula expressed in equation (1.7) of chapter 2, explain the changes to the overall Gini index as a function of the evolution of the income-share and the concentration index of the several income-sources. In particular, labour formalisation is related to the evolution of the parameters referring to income derived from formal and informal employment.

The work of Amarante (2016) is representative of the problems of using income-source decompositions to study the impact of labour formalisation. Studying household per capita income inequality in Argentina between 2002 and 2011, the author finds that formal wages (not discriminated by skill level) were concentrated relative to total household per capita in these two years. Between 2002 and 2011, the income-share of formal wages rose by 11.1 pp, which increased the Gini index by 0.064, and their concentration index fell by 0.078, decreasing the Gini index by 0.039, which led to an overall impact of formal wages having raised inequality by 0.024. The error in using income-source decompositions to study labour formalisation, however, is that it confuses two different mechanisms that could have increased the share of formal wages in total income. Rising relative wages for formal workers, given their high concentration index, are expected to have a regressive impact, whilst a transition from informal to formal labour contracts is expected to have a progressive impact – both of these processes, however, increase the income-share of formal wages.

To correctly measure the impact of labour formalisation, it is necessary to adjudicate between these two processes (rising relative formal wages and a transition from informality to formality), for which the methods developed in this thesis are instrumental. The impact of transitions to formality can be measured through expressions (1.13) and (1.15) discussed in chapter 2, and the results for Argentina indicate that a 1 pp rise in the population-share of low-skilled, formal workers households was expected to *decrease* the Gini index by around 0.0009 in 2014 (see Table A5.5). The results of rising relative income for formal, low-skilled workers can in turn be measured through expressions (1.14) and (1.16), and the results for Argentina indicate that a 10 pp rise in their relative income was expected to *increase* inequality by about 0.0008 in 2014 (this regressive impact would be larger if all formal workers were considered, and not only low-skilled ones). What took place between 2003 and 2014 in Argentina was a process of low-skilled labour formalisation,

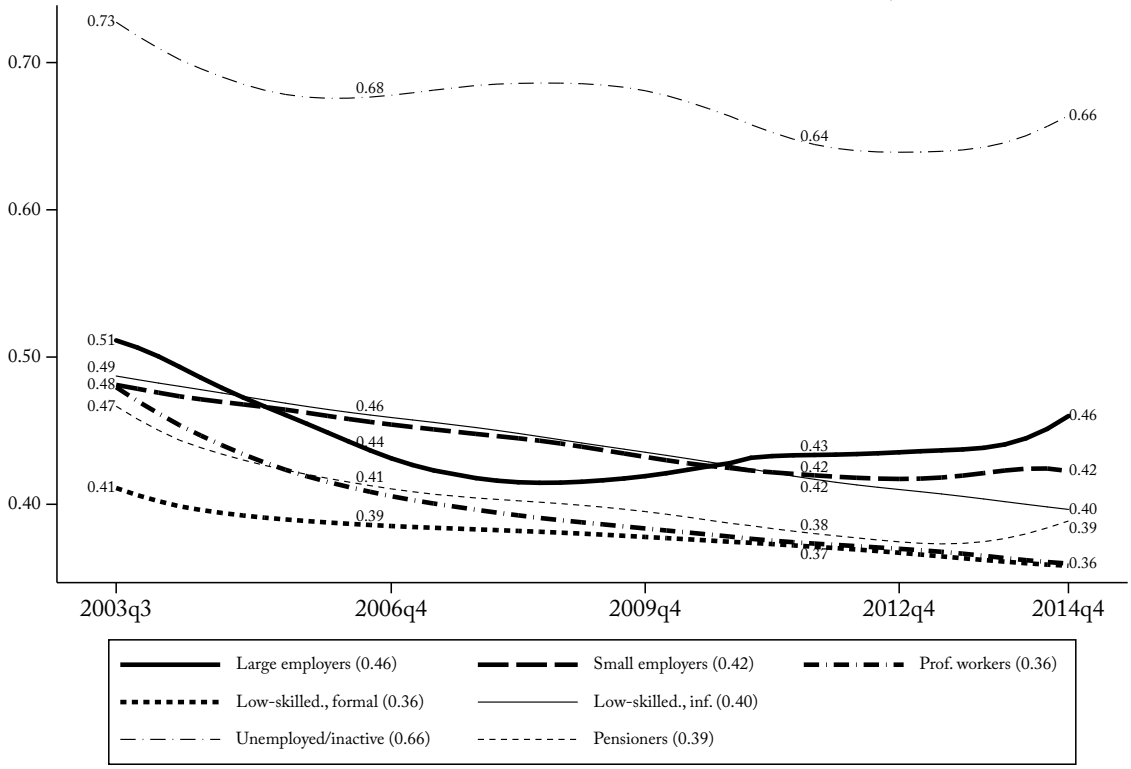
responsible for a fall of the Gini index of 0.021 (see Figure 6.8), alongside slight gains in relative income for informal workers, which led to a further decrease of 0.007 in the Gini index (see Figure 6.10). Therefore, *low-skilled labour formalisation was a progressive process in Argentina under the Kirchners, differently from the misleading conclusions based on income-source decompositions,* with clear policy implications for labour market regulations.[120]

The two processes studied so far, referring to the size and the relative income of class fractions, constitute the core effects of the cumulative-causation mechanism, and together explain two thirds of the decrease of inequality between 2003 and 2014 (taking into account changes related to all class fractions). This indicates that the bulk of the redistribution process occurred until 2011, driven by a higher demand for low-skilled labour which led to labour formalisation, to wage gains for informal workers and to relative losses for professional workers, who were in low demand. Income-supporting policies stimulated the process at several points, such as PJyJHD in the beginning, and non-contributory pensions and AUH around 2008 and 2009. The decrease of unemployment was also a strong driver of redistribution in the initial years, but the core determinant of the fall of inequality was the proposed cumulative-causation process. The other elements studied below also played a role, and it is shown how their causes can be broadly traced back to the same changes in the structure of the economy, but the elements presented so far already corroborate the interpretive framework.

As shown in Figure 6.11, there was also an across-the-board decrease of intra-class income concentration, as all class fractions experienced an equalising process that reduced their internal Gini indices by between 0.050 and 0.10. This decrease of inequality was, furthermore, spread over time, although the general trends of a more rapid decrease in the initial years and a tapering off towards the end can be seen for several groups. The exception concerns large employers, who displayed varying trends between 2003 and 2014, but the results relating to this group are troubled by uncertainty in light of data shortcomings.

[120] See also Maurizio (2014) for an approach using the panel structure of EPH and based on a decomposition of the Theil index of labour market income, which supports the results of this thesis, and Beccaria *et al.* (2014, 2015).

Figure 6.11 Intra-class concentration of class fractions in Argentina (G_i), 2003q3-2014q4



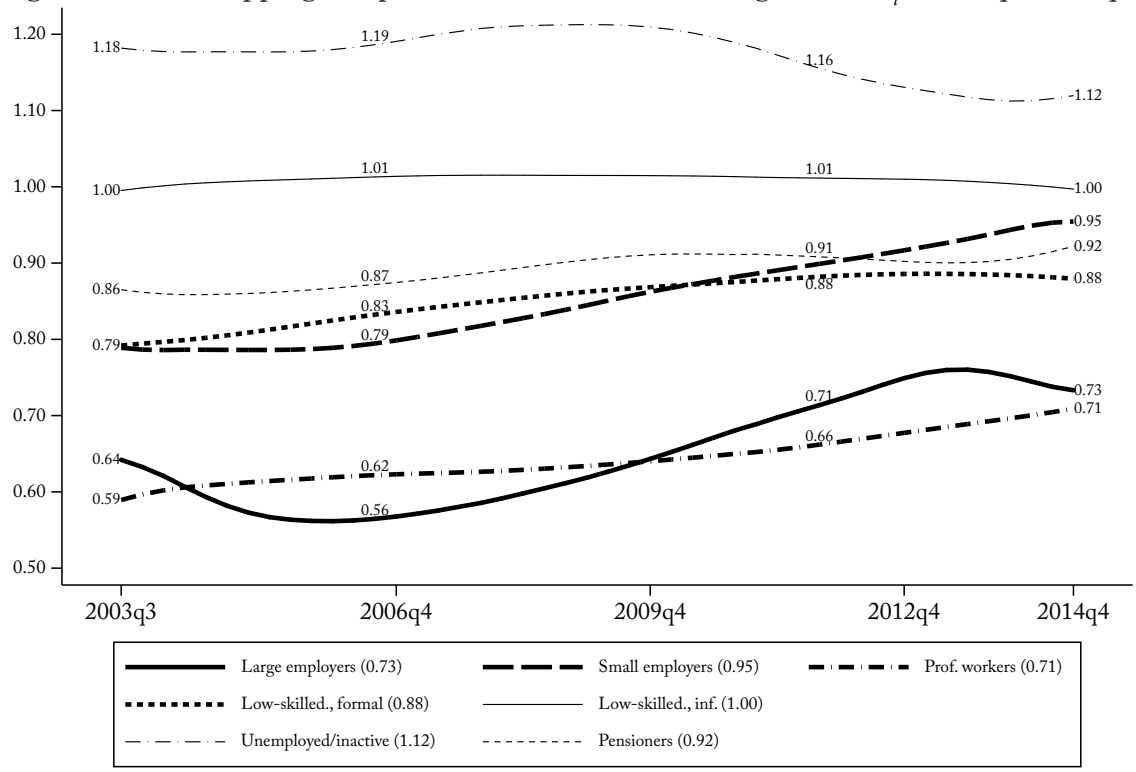
Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Values shown for 2003q3, 2006q3, 2011q4 and 2014q4. Final values shown in the legend after the identification of the positions.

Source: Prepared by the author based on data from EPH-C.

The broad nature of this de-concentration process suggests its causes are to be found in the main determinant of within-class income distribution, that is, the sectoral and employment structure of the economy. Rising real MWs until the end of 2007, by raising lower wages, are likely to have compressed the left-tail of the distribution of low-skilled workers and hence reduced inequality, particularly amongst formal workers (see Maurizio and Vázquez 2016, Tornaroli *et al.* 2014). A more equal distribution of education and skills within all fractions over the whole period is also expected to have had the same effect for all workers (see Galiani *et al.* 2017). On top of this, the rise of relatively low-paid services sectors intensive in low-skilled labour, particularly after 2008, is expected to have made the distribution more equal for low-skilled workers (see chapter 5 and Maurizio 2014). The large rise in collective bargaining agreements during the Kirchner governments, discussed above, was also a factor in reducing inequality amongst workers (Maurizio and Vázquez 2016). As for professionals, greater employment-creation in sectors that paid wages slightly below the average and employed a large share of professionals, especially education, can help explain the decrease of their concentration. Finally, policy changes

that made pensions more progressive by introducing a non-contributory element stand behind the fall of inequality for pensioners.[121]

Figure 6.12 Overlapping component of class fractions in Argentina (O_i), 2003q3-2014q4



Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Values shown for 2003q3, 2006q3, 2011q4 and 2014q4. Final values shown in the legend after the identification of the positions.

Source: Prepared by the author based on data from EPH-C.

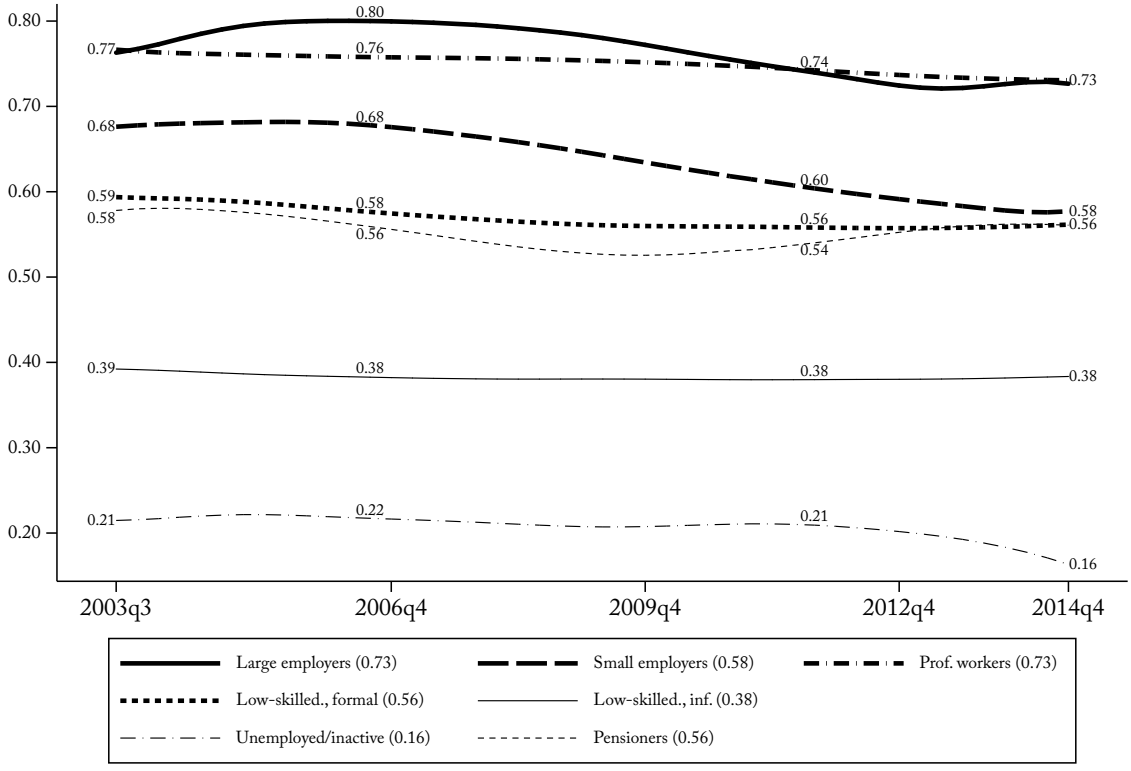
Figure 6.12 shows how the overlapping coefficient of class fractions increased considerably for all groups, adding detail to the previously mentioned process of falling stratification. Given the concomitance of falling within-class concentration and rising overlapping, the process that increased overlapping was the narrowing gap between the relative income of class fractions.[122] With the exception of the unemployed or inactive and of informal workers, the overlapping coefficient of all groups increased by between 6 and 16 points from 2003 until 2014. The leading ones were small employers, whose overlapping index went from 0.79 in 2003 to 0.95 in 2014, and professional workers, whose index went from 0.59 to 0.71 over the same period.

[121] As noted in section 6.2, income from pensions became more concentrated with relation to total household per capita income since about 2009 (see Table A5.2). The income of pensioners, as a group, did become internally more equal, however. More research is necessary to establish the causes of these divergent trends.

[122] If within-class concentration had been rising, this greater spread of the groups' income could also extend them into each other's distribution. As this was not the case, it was the 'shifts' represented by changing relative income which were responsible for greater overlapping.

The rise in overlapping that occurred for professional workers and small employers was determined by their greater presence in lower-ranges of the distribution, and not by them reaching groups previously above them in the distribution. Given that professional workers and small employers are the main representatives of the middle-class, the 'contradictory locations within class relations' in Wright's (1985) formulation, this greater overlapping implied the middle-class had to share their space in the income distribution to a much larger extent with members of the working classes. This hence suggests that not only did the traditional middle-class lose relative income and had job opportunities curtailed, but they also lost distinction, in the sense of no longer being the exclusive occupants of a section of the distribution that granted access to differentiated goods and services. Although there is no space to discuss the full implications of this process in terms of class relations, it is worth pointing out that, with due mediations, it can serve as the material basis to investigate the growing opposition of large sections of the middle-class to the Kirchner governments (on which, see Boos 2017, Wylde 2016).

Figure 6.13 Mean rank of class fractions in Argentina (F_{Ui}), 2003q3-2014q4



Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions. Values shown for 2003q3, 2006q3, 2011q4 and 2014q4. Final values shown in the legend after the identification of the positions.

Source: Prepared by the author based on data from EPH-C.

Finally, the last component of the ANOGI decomposition is presented in Figure 6.13, the mean rank of class fractions, which proved much more resilient. This parameter is the less volatile of the decomposition, as it only depends on the ordering of observations (i.e. it is

insensitive to income gaps), but, nevertheless, its relative continuity during the Kirchner governments indicates there was no overhauling of class relations during the period. In this vein, groups with above-average rank did lose some positions between 2003 and 2014, but, apart from small employers, this was a rather restricted process, as it comprehended changes of about 2 to 4 points. Under this broad scenario of stability, the trends of mean ranks present a stagnation after 2011 similar to that of other components.

Mean ranks changed the most between mid-2006 and 2011, however, which suggests an inflection in the dynamics of redistribution between the 2003-2006 and the 2006-2011 period. Specifically, gains for low-income groups over the first three years of redistribution did not affect their ordering in the distribution, but from 2006 until 2011 further falls in inequality were accompanied by a re-ranking of class fractions. The most significant re-ordering was of small employers in relation to formal, low-skilled workers: until about the end of 2006, small employers were ranked around 0.62 in the distribution of formal workers, falling to 0.52 between 2007 and 2014.[123] This parallels the larger loss of relative income and the greater increase of overlapping that small employers experienced, indicating that they were the biggest 'losers' in the pattern of accumulation. The reasons for this loss are likely to have been a combination of wage gains for low-skilled workers, labour formalisation and slow productivity gains, all of which eroded the profitability of small employers and increasingly made their position in the distribution of income similar to that of formal, low-skilled workers (sectoral and productivity dynamics were discussed in chapter 5).

This section has explored the distributive process under the Kirchner governments and identified the class fractions whose dynamics were relevant drivers of redistribution. It has first shown that the between-class component fell much more sharply than inequality within class fractions. Second, it proposed a periodisation for the process, in terms of a rapid fall between 2003 and the middle of 2006, a substantial but lower fall from the middle of 2006 until the end of 2011, and a stagnation from 2012 until 2014. Third, it has shown how the rise of formal wages in total national income, was based not on rising relative wages for formal workers, but rather on their numerical increase through formalisation. In fact, only informal workers gained in terms of relative income, whilst professional workers, large and – especially – small employers lost. Fourth, it was found that the impact of changes in the size and relative income of class fractions together explained about two thirds of the total decrease of inequality under the Kirchners. The next section brings

[123] The mean rank of small employers in the distribution of informal, low-skilled workers also decreased from around 0.78 in 2007 to about 0.68 in 2014, whilst in the distribution of professional workers it fell from about 0.42 to 0.35 over the same period.

together the different elements discussed so far to provide an explanation of the dynamics of redistribution between 2003 and 2014.

6.4. Piecing the elements together: a macroeconomic-led redistribution and its exhaustion

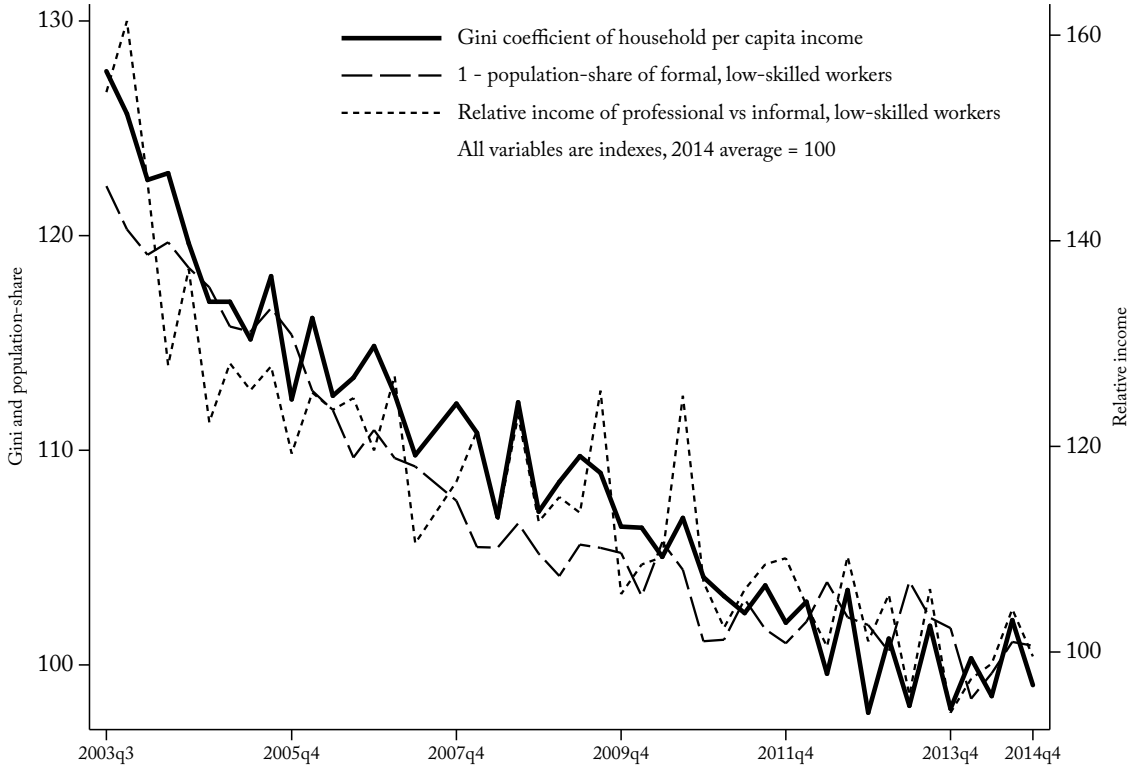
It is now possible to bring together the different elements presented in this chapter to offer a more concrete description of the redistributive process and, based on this, an explanation for why it faltered after 2011. Before delving into the temporality of the distributive process, Figure 6.14 highlights its two main processes: labour formalisation and the decrease of wage premia for professional workers. The figure shows the overall Gini index of per capita household income, 1 minus the population-share of formal, low-skilled workers households (this form is used for the statistic to move together with inequality), and the ratio of the mean per capita income of professional workers to informal, low-skilled households. All variables are indexes, their average values for 2014 taken as reference. It is patent how these three variables move very closely together. Indeed, a simple regression of overall inequality against the other two variables leads to a root-mean-squared-error of 0.008, showing how they are excellent predictors of inequality during the 2003-2014 period.[124]

If the short story about falling inequality in Argentina between 2003 and 2014 was, therefore, that of labour formalisation and the relative devaluing of professional occupations, this process did undergo three qualitatively different periods. The first, from 2003 until the middle of 2006, was the exit from the 1999-2002 crisis. It was based on a high-growth, high-employment pattern after the massive devaluation of real wages and the loss of income caused by the crisis. MW hikes, policies such as PJyJHD to deal with skyrocketing destitution, greater government transfers funded through taxes on commodity exports, and growing export revenue enabled by a devalued currency and high international demand together raised effective demand and drove growth and redistribution from 2003 until 2006 (see chapter 5). Partially because of the very low starting point in 2003 – there was ample idle capacity and unemployment, low wages, and a devalued currency – and partially because of greater international demand for Argentina's exports, the country could grow, redistribute income and generate real gains for all class fractions between 2003 and 2006. By the end of 2006, the country had reached the real GDP per capita level of 1998 (data from the World Bank), unemployment rates had been halved to 7.2% (based on the EPH-Cs), and the real MW had nearly tripled since 2003 (deflated by the

[124] Of course, this simple regression should not by itself be taken as any evidence of causal effects, nor is it meant to. It is simply a means to illustrate a very strong correlation and high predictive power.

official CPI). Inequality fell by about 0.06 over these years – more than half of the total decrease of inequality between 2003 and 2014 – driven by the between-class dimension, particularly through lower unemployment, labour formalisation and relatively lower professional salaries.

Figure 6.14 Key determinants of income redistribution in Argentina, 2003q3 - 2014q4



Source: Prepared by the author based on data from EPH-C.

The second period, from mid-2006 until the end of 2011, was the consolidation and eventual exhaustion of the pattern of accumulation under the Kirchners. Growth and redistribution forged ahead strongly, if at a comparatively slower pace: average yearly growth rates of output declined from 8.7% between 2003 and 2006 to 4.7% between 2007 and 2011, whilst the average yearly decline of the Gini index went from 0.023 to 0.011. The weakening or rolling back of three pillars of the previous period explain this: lower job creation, a stable real MW, and lower social security transfers. From 2002 until 2006, about 800,000 net jobs were created per year, a value that fell to about 475,000 from 2007 until 2011 (data from National Accounts, see chapter 5), the real MW was roughly stable between 2007 and 2011, after nearly tripling in the previous period, and PJyJHD transfers lost value in real terms. Later in the period, the introduction of non-contributory pensions and AUH had important effects, but not to the same scale as the emergency measures of the beginning of the decade, as attested by the lower share of social security benefits in the income of the bottom percentiles of the population shown in section 6.3 (see also Gasparini and Cruces 2010, Lustig and Pessino 2014).

This second period from mid-2006 until 2011, following the extraordinary dynamics of crisis-recovery and before the exhaustion from 2012 until the end of the Kirchner governments, can be seen as the unfolding of the pattern of accumulation driven by its core engine, the growth-redistribution-regressive structural change process. Changes to the size and the relative income of the class fractions between mid-2006 and the end of 2011, which are the elements more closely associated to the regressive structural change, explain a decrease of about 0.035 in the Gini index (of a total fall of around 0.050). Falls to the between-class dimension led redistribution, with developments related to the three categories of workers being the most relevant. Nevertheless, there were also signs that a distributive conflict between capital and labour was becoming more heated, as wage gains and labour formalisation, in a context of slow productivity gains and a regressive structural change (see chapter 5), eroded profit margins and put employers on the losing side. This was particularly clear for small employers, whose position in the distribution of income became very similar to that of formal, low-skilled workers.

The third period, which began in 2012 and lasted until the end of the Kirchner administrations, was the breakdown of the model. As growth ground to a halt, labour formalisation no longer occurred and premia for professional workers stabilised, whilst other policies that had also driven redistribution in previous periods were absent, such as MW hikes, the expansion of CCTs, or transformations to the country's pension system. In short, the absence of all previously relevant drivers of income redistribution explains the stagnation of inequality from 2012 onwards.

This collapse of the pattern of accumulation and of redistribution came in the wake of a gradual tightening of the balance-of-payments and the inflation constraints during the previous growth and redistribution process of 2003-2011: by 2011, yearly inflation had risen to 25%, the current account had reached a deficit of US$ 5.3 billion (1.0% of GDP), the volume of imports had climbed to 3.6 times what it had been in 2003 and exports began to decrease in volume and value.[125] Taking a further blow from the international scenario, gains in the international terms of trade, which had occurred since 2001, also reversed after 2011. The different policy arrangements put in place were incapable of securing balance-of-payments solvency and stabilising inflation, and furthermore had unsustainable fiscal costs through energy and transport subsidies that reached almost 5% of GDP in 2011 (for details, see chapter 5).[126]

Underlying these tightening constraints were the contradictory dynamics of the regressive structural change. On the one hand, higher demand for low-skilled labour

[125] Inflation data based on the Pricestat index, foreign trade data from INDEC.

[126] Data for the cost of subsidies presented by Damill *et al*. (2015: 80).

drove redistribution and a labour-intensive growth model. On the other hand, this meant an increase of low-productivity sectors that prevented sustained wage increases and an upgrading of country's insertion into the world market. As a result, growth would increase the demand for imports and wage-based redistribution would necessarily erode foreign competitiveness, thus pressuring the balance-of-payments and making foreign solvency dependent on high international commodity prices or continuous devaluations of the real exchange rate. Such devaluations would, however, lead to spiralling inflation via the pass-through of international to domestic prices, and so were unfeasible. Therefore, *in the absence of a broader policy framework that could drive a progressive structural change, the pattern of accumulation had a deep dependence on high commodity prices*. As such, a turn to the worse of the global economy in the first decade of the 21st century hit an already-fragile economy, leading growth and redistribution to break down together in Argentina after 2011.

6.5. Conclusion

This chapter has explored the process of income redistribution that took place in Argentina during the Kirchner administrations (2003-2015), in connection with the overall pattern of accumulation. The central question was to explain how a decrease of the Gini index of household per capita income inequality of about 0.110 between 2003 and 2011, alongside a rise of nearly 50% in real GDP per capita, gave way to a period of nearly stagnant income distribution and falling real income from 2012 until the end of the Kirchner governments. Using income-source and group-wise decompositions of the Gini index, this chapter investigated how the composition of household per capita income changed over time, the progressivity of different income-sources, the latter's changing contribution to households along the distribution of income, and the structure of inequality across classes. The transformations to the shape of inequality were explored in relation to the macroeconomic scenario and a changing policy mix, including the real value of the MW, different CCT schemes, and pension reforms. Connecting these different elements, this chapter proposed a periodisation of the redistribution of income under the Kirchners, highlighting the centrality of Argentina's regressive structural change to explain both the period of growth and redistribution, between 2003 and 2011, and its exhaustion, from 2012 onwards.

First, at an aggregate level, the chapter showed how the main changes in the composition of national income between 2003 and 2014 regarded shifts between different forms of labour income. Namely, the income-share of the wages of formal, low-skilled workers rose in lieu of informal wages, professional salaries and, to a lesser extent, capital income.

Pensions also rose slightly, whilst CCT-based social security benefits, although they represented a small share of total household income at any given year, were an important source for those at the bottom of the distribution, as they had a high degree of targeting. It was also shown how the concentration of the several income-sources moved pretty much in tandem with that of the overall distribution, with no income-source taking a clear temporal precedence in driving redistribution.

Using a class-based decomposition of the Gini index, it was then shown how a decrease of inequality between class fractions drove redistribution between during the Kirchner governments. In particular, the impact of the overall changes to the size and to the relative income of class fractions accounted for a fall of 0.074 in the Gini index, which was about two thirds of the total decrease of inequality between 2003 and 2014. Two processes were the most relevant determinants of the fall of inequality: the transition from informal to formal low-skilled employment and the relative decrease of the income of professional workers. There were also suggestions of a growing distributive conflict between capital and labour from about 2007 until 2011, which substantially reduced the relative income of small employers, likely based on an erosion of profit margins via rising wages for low-skilled workers combined to slow labour productivity gains. In this vein, the relative income, the mean rank in the distribution and the overlapping coefficients of small employers came remarkably close to that of formal, low-skilled workers. It is also important to notice that shortcomings in the main database used, the EPH-C, are expected to severely underreport capital-based income, the results of which must thus be taken with caution.

Putting these elements together, it was proposed the redistributive episode comprised three different periods: the exit from the crisis, the main phase, and the breakdown. The first period, from 2003 until mid-2006, was exceptional in that relied on the very particular dynamics of the aftermath of the 1999-2002 crisis, which comprised low wages, intense slack in the labour market and high foreign competitiveness of domestic firms in light of a devalued currency. Redistribution was driven by a strong injection of domestic and international aggregate demand, rising real MWs, and government transfers funded by taxes on commodity exports, which led to growth, strong job creation and wage gains for low-skilled workers. However, if exiting a crisis is by no means automatic, especially in an equality-led path as was the case in Argentina between 2003 and 2006, neither can the initial conditions of the aftermath of a crisis be expected to extend for long, so the dynamics of growth and redistribution soon changed and gave way to the second period.

If the first period was exceptional, the second – lasting from mid-2006 until the end of 2011 – comprised the core process of income redistribution. It was proposed that the explanation for the fall of inequality that occurred between mid-2006 and 2011, as well as

the gradual building-up of fragilities that would eventually spell its end in 2012, lies in the cumulative-causation process discussed throughout the thesis, which connects growth, income redistribution and regressive structural change. In particular, the regressive structural change heated the low-skilled segment of the labour market, producing labour formalisation and decreasing the relative income of professional workers, which were the two key drivers of redistribution between mid-2006 and 2011. Further relevant processes include falling relative income for employers, likely due to reduced profit margins, the introduction of the non-contributory pension scheme Moratorium, the implementation of the CCT programme AUH, and falling inequality internal to each class fraction.

The third period, from 2012 until the end of the Kirchner administrations, was the breakdown of the pattern of accumulation as a whole, which collapsed through its own internal dynamics aggravated by a reversal of the international scenario. The very process behind growth and redistribution from 2003 until 2011, centred as it was on the regressive structural change, had deteriorated the economy's productive structure, pressured the balance-of-payments and raised inflation, tightening the economy's constraints. As detailed in chapter 5, under these circumstances it was unfeasible to devalue the real exchange rate to bring the current-account into a surplus, given its inflationary implications, the controls on foreign exchange that were implemented proved ineffective, and price freezes to control inflation were prohibitively costly, not to mention also ineffective and with a negative distributive impact. In this vein, the cumulative causation process of growth, regressive structural change and income redistribution ultimately kept the economy dependent on high international commodity prices – which, of course, were beyond the control of any government. In light of this, the development strategy simply could not come up with the necessary tools to overcome the economy's constraints, but rather muddled through with negligible effects after 2011. Cristina Kirchner might have been in power until December 2015, but as far as growth and income redistribution are concerned, the contribution of her government was over when 2012 begun.

7

Conclusion

7.1. Introduction

This thesis investigated the development strategies of the left-of-centre governments that were in power during the early 21st century in Brazil (the PT, 2003-2016) and Argentina (the PJ, 2003-2015), framed against the larger continental trend of the rise and fall of the 'Pink Tide'. The central concern that guided this research was to explain why these strategies led to growth and income redistribution for around a decade, but stalled, and then collapsed in the first years of the 2010s. To do so, this thesis analysed the dynamics of accumulation and class inequality in these economies, focusing on identifying the processes, structures and enabling conditions that, as they delivered growth and redistribution, also created fragilities that these development strategies could not overcome.

After laying down a broad interpretation of the rise and fall of the Pink Tide in Latin America and outlining the methods that guided this research, the results were presented in two chapters each for Brazil and Argentina. The first chapter for each country identified the central dynamics of the pattern of accumulation. It sequentially approached the drivers of growth, the sectoral transformations of the productive structure, and how growth and structural change determined the evolution of the economy's key constraints. Drawing on this, the second chapter for each country explored in greater depth the process of income redistribution and its exhaustion. Employing different methods and inequality-decompositions, it explored the changing composition of household income, investigated

how redistribution impacted the class structure of inequality, and identified the main processes responsible for the equalisation that took place.

This Conclusion is structured as follows. Section 7.2 reviews the main findings of chapter 1, regarding the economic political processes related to the rise and fall of the Pink Tide administrations. Section 7.3 summarises the approach that was used to study the Brazilian and Argentinean experiences during the Pink Tide, and highlights the contributions made to the measurement of inequality. Section 7.4 presents the main results and conclusions related to Brazil, based on chapters 3 and 4, whilst section 7.5 does the same for Argentina, drawing on chapters 5 and 6. Section 7.6 concludes, suggesting avenues for further research.

7.2. Reformism, class conciliation and the Pink Tide

Chapter 1 cast a broad look on the economic and political dynamics during the Pink Tide governments, focused on identifying the drivers and limits of the growth and redistribution process that took place. It highlighted that there was a widespread regressive structural change in Latin America under the influence of the commodity boom, as the employment-share of manufacturing decreased in almost all countries and exports became more concentrated in unprocessed primary products. At the same time, there was an improvement in the distribution of income and a decline in poverty rates, driven by higher MWs, CCTs (financed partially through the taxation of commodity exports), and a growth pattern that raised the demand for low-skilled labour. Politically, the parties in power supported the accumulation strategies of large domestic capitalists, whilst also incorporating the leaders of certain trade unions and social movements into these governments.

Based on this review of the evidence and the literature, a general framework for interpreting and comparing Pink Tide governments was put forward. It was argued that the improvements in living standards and inequality that occurred were, in large measure, a result of policies and their knock-on effects, and not simply the consequence of supportive trends in the global economy. Nevertheless, the governments' development strategies did not secure the economic and the political conditions that were necessary to sustain distributive gains over a longer period of time. Economically, this occurred because of the regressive structural change that reduced the availability of quality jobs and reinforced the dependence of these countries on volatile international commodity prices. Politically, the sources of fragility were due to the demobilisation of popular organisations, which prevented the emergence of strong political forces that could hold the government in check, as well as push for progressive policies. In light of this, it was argued that situations

of crisis would be 'resolved' by the implementation of austerity measures, and not by the deepening of the progressive elements of Pink Tide governments, in effect putting an end to income redistribution.

7.3. Methods used in the thesis and contributions to the measurement of inequality

Chapter 2 presented the methods that were later used to analyse the development strategies of the PT and the PJ. It proposed a framework to analyse growth and income redistribution in connection to each other, drawing out implications for the sustainability of accumulation in terms of the balance-of-payments and the inflation constraints. It also developed innovations to the measurement of inequality, which were later tested by studying the impact of labour formalisation in Argentina.

Chapter 2 proposed to analyse the experience of Brazil and Argentina in terms of a cumulative-causation process with the following characteristics. Autonomous sources of effective demand kick-started growth in both countries and, in varying intensities over time, continued to stimulate it. These autonomous drivers included income-supporting policies (MW hikes, CCTs, social security benefits) and greater export revenue in domestic currency (through currency devaluations, or through higher international prices or demand for the country's exports). In both countries, the intensity of the export-driver declined over time and the income-supporting drivers of demand eventually dominated (from around 2006 onwards). MW hikes, CCTs and greater social security benefits then initiated a cumulative-causation process. As the income of households at the bottom of the distribution increased, the demand for wage-goods and services rose, stimulating a response from domestic firms. The sectors producing wage-goods and services were intensive in low-skilled labour, so as these sectors created employment they heated up the low-skilled segments of the labour market. A heated-up labour market in turn decreased inequality, through labour formalisation and higher relative wages for low-skilled workers, and added a fresh stimulus to the demand for wage-goods. Finally, rising demand for wage goods reinitiated the cycle of growth and income redistribution. In sum, a set of policies changed the volume and composition of effective demand, initiating a cycle of growth, redistribution and regressive structural change.

This cumulative-causation process was also a key driver of Brazil's and Argentina's economic fragilities. As part and parcel of growth and redistribution, employment grew in low-productivity, labour-intensive sectors; consequently, the economies were driven by a regressive structural change. This implied, first, that wage gains (particularly in services) would produce cost-push inflationary pressures. Second, that growth and wage gains

would strain the balance-of-trade (and, hence, the balance-of-payments over the medium and long term), in light of growing demand for imports and slow global productivity gains in the domestic economy. As a result, growth and income redistribution, connected by a regressive structural change, would gradually tighten the balance-of-payments and the inflation constraints in Brazil and Argentina. The policy framework in these two countries hence needed tools to offset these constraints, to avoid the risk of jeopardising accumulation. This framework was then applied, in chapters 3 through 6, to analyse the two countries and investigate how the development strategies attempted to circumvent these constraints.

Chapter 2 also developed innovations to the ANOGI group-wise decomposition of the Gini index. It proposed a different expression for estimating each group's share of total inequality, which takes into account their contribution to the within- and the between-groups dimensions. Chapter 2 also developed expressions to measure the impact on total inequality of changes to the population-share and the relative income of groups, which were tested in the study of labour formalisation (in chapters 4 and 6). This revealed that labour formalisation had a progressive impact in Brazil and Argentina, contrary to the conclusions of the literature based on income-source decompositions (Amarante 2016, Judzik *et al.* 2017, Keifman and Maurizio 2012, 2014).

7.4. Growth and redistribution in Brazil

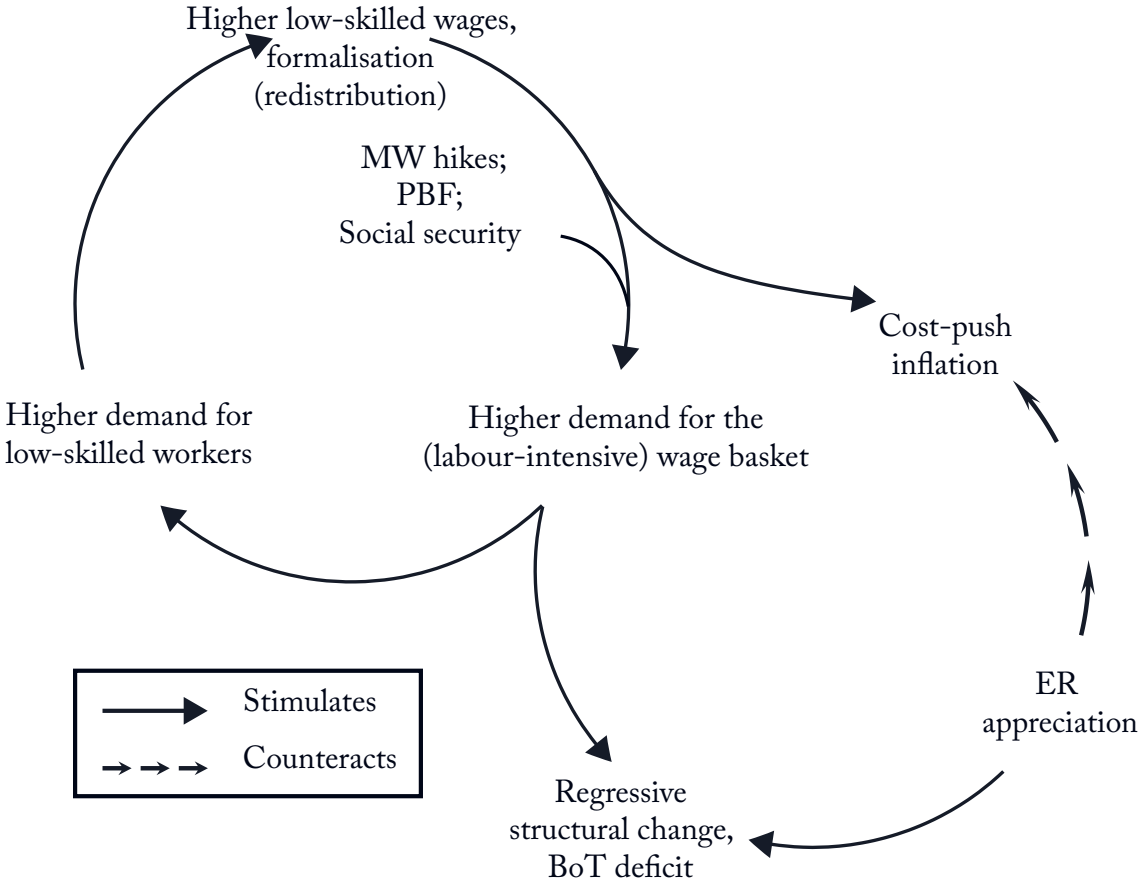
This thesis showed that growth and redistribution in Brazil, during the PT governments, were essentially driven by domestic sources of demand and led to a strong regressive structural change. This created growing fragilities for the economy in the first years of the 2010s, as the balance-of-trade deteriorated and inflation rose, whilst the policy framework in place proved incapable of overcoming these constraints. The processes behind growth, redistribution and the accumulation of fragilities in the Brazilian economy are summarised in Figure 7.1.

It was argued that a set of social and labour-market policies, whose effects were spread over the 2003-2013 period, were key drivers of growth and redistribution in Brazil. These policies comprehended MW hikes, the CCT programme PBF, greater pension coverage, and larger social security benefits. Between 2002 and 2013, the MW rose by 73% in real terms, whilst pensions and benefits (including PBF and BPC) increased their share of total household income by about 1 pp each.[127] This stimulated the demand for wage-goods and especially services, which led to employment-creation being concentrated in

[127] Data from the PNADs.

construction, sales, food and beverages, and for-profit health and education. Together, these five sectors accounted for about 48% of the jobs created between 2002 and 2013.[128] Furthermore, the 10 private leading sectors paid wages 22% below the economy-wide average and their labour productivity was 23% below that of the whole economy in 2013. Growth was, therefore, driven by a regressive structural change.

Figure 7.1 The dynamics and constraints of growth and redistribution in Brazil under the PT governments



Source: Prepared by the author.

Chapter 4 showed that the dynamics of income redistribution were closely associated to this pattern of growth. Higher demand for low-skilled labour led to labour formalisation, so that the population-share of formal, low-skilled workers' households rose from 36% in 2002 to 43% in 2013, whilst that of informal, low-skilled workers declined from 40 to 36%.[129] Lower demand for professional labour in turn decreased their wage premia, reducing income-gaps between different categories of workers. At the same time, the relative income of large and small employers was much more stable, highlighting the restricted nature of the redistribution process that took place. It was shown that changes

[128] Sectoral data for employment, wages and labour productivity from the National Accounts.

[129] Data from the PNADs.

in the population-share and in the relative income of class fractions, driven by the ongoing regressive structural change, together accounted for nearly 80% of the fall in inequality that occurred from 2003 until 2013.

It was also shown how this process of growth, redistribution and regressive structural change fuelled inflation and led to a deterioration of foreign trade patterns in Brazil. Regarding the balance-of-trade, it was shown that the technological intensity of Brazilian exports decreased, with adverse implications for their demand over the medium and long term, and aggregate exports stagnated in volume from 2006 onwards. Meanwhile, imports continued to be rigid, since they were concentrated in intermediate and capital goods with few domestic substitutes. Therefore, guaranteeing a surplus in the current account became increasingly difficult: as the demand for imports continued to be a rigid function of domestic output itself, the demand for Brazilian exports became increasingly attached to the international dynamics of commodities. As a result, the balance-of-trade declined from a surplus of US$ 36 billion in 2006 to a deficit of US$ 55 billion in 2014, whilst the current account declined from a surplus of US$ 13 billion to a deficit of US$ 104 billion over the same period.[130]

Regarding inflation, it was shown that services were the fastest-growing element of the overall price index (IPCA). Inflation in services was consistently above the Central Bank's inflation target and non-services categories after 2006: on average, the price of services grew by 7.9% per year between 2007 and 2014, whilst the price of non-services items grew by 4.1%. This meant wage gains in services were a key driver of inflation, as well as of redistribution. It was shown that the tools of the policy framework controlled inflation by appreciating the exchange rate though high interest rates used to attract foreign capital, which led to an appreciation of the real exchange rate of around 94% between 2003 and 2013.[131] This was an unsustainable process over the long term, however, as it increased foreign deficits and because the exchange rate could not be appreciated indefinitely. The other mechanisms that were used to fight inflation, such as holding back administered prices and subsidising fuel imports, were not only of limited efficacy, but also had high fiscal costs.

This thesis argued that the development strategy of the PT faced a conundrum in the first years of the 2010s: growth and income redistribution produced foreign deficits and raised inflation, and there were no policy tools in place that could attack either of these constraints without tightening the other. The government did not implement new drivers of redistribution, and neither did it find ways to drive productivity gains and sustain

[130] Balance-of-payments data from Ipeadata.

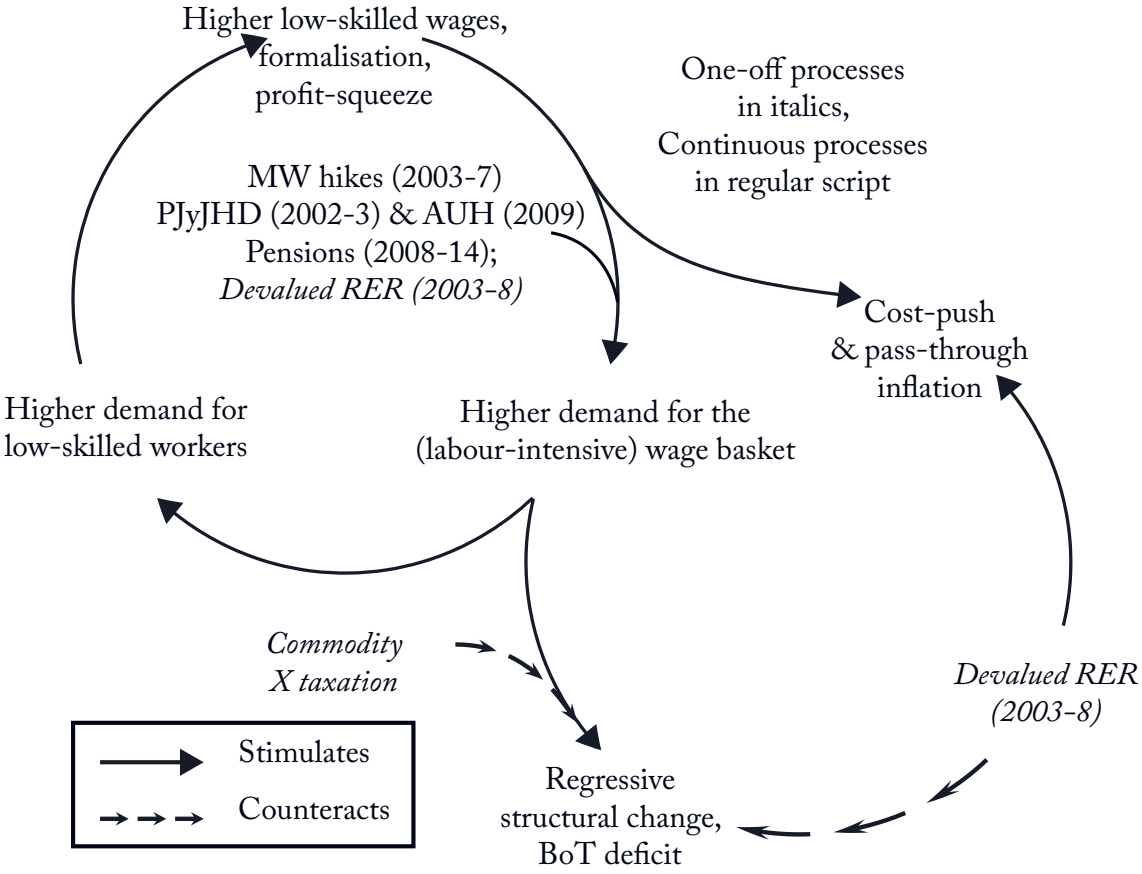
[131] Real exchange rate data from Ipeadata.

effective demand without fuelling inflation. Under an ongoing regressive structural change and with an overvalued currency, after 2013 the development strategy was no longer able to deliver growth, redistribution, monetary stability and balance-of-payments solvency.

7.5. Growth and redistribution in Argentina

This thesis showed that the PJ's development strategy led Argentina to maintain some of the world's highest growth rates between 2003 and 2011, whilst also driving a substantial redistribution of income. In spite of this, it was argued that right from 2003 there were signs of fragilities, as imports rose faster than exports every year and inflation picked up quickly, eventually leading to the collapse of the pattern of accumulation from 2012 onwards. The processes that led to growth, redistribution and the accumulation of fragilities in the Argentinean economy are summarised in Figure 7.2.

Figure 7.2 The dynamics and constraints of growth and redistribution in Argentina under the Kirchner administrations



Source: Prepared by the author.

It was shown that there were important similarities between the processes that led to growth and redistribution in Argentina and in Brazil, although their timing and intensity varied. Similar to Brazil, MW hikes, CCTs and pensions played a key role in raising

low incomes in Argentina, but these processes were not spread evenly throughout the whole period and they were, as rule, more intense. Between 2003 and 2007, the real MW nearly tripled, and it was then maintained reasonably stable until 2015, although with a decreasing trend (deflated by the Pricestat index). Pensions in turn decreased their share of total household income by about 1 pp between 2003 and 2008, but after this point the introduction of a non-contributory scheme (Moratorium) also made pensions drive distributive gains.[132] Moratorium made the income-share of pensions rise by 3 pp from 2008 until 2014. There were also two relevant CCTs in Argentina, PJyJHD and AUH. PJyJHD had a key role in relieving the acute situation of destitution in the country in 2002 and 2003, but the real value of its transfers decreased after 2003. As a share of total household income, government transfers fell by nearly 2 pp between 2003 and 2009. With the introduction of AUH in 2009, the declining income-share of government transfers was stalled, but not reversed. MW hikes and higher non-contributory pensions thus played a larger role in Argentina, although the former occurred until about 2007 and the latter from 2008 onwards, whilst CCTs had a smaller overall role.

It was argued that income-supporting policies also played an important role in driving growth and income redistribution in Argentina, similar to the Brazilian experience. However, between 2003 and 2008 there was a driver of growth that differentiates the two cases. During the 2003-2008 period, Argentina maintained an undervalued and stable real exchange rate, leading to substantially greater export revenue in domestic currency. The current-account surplus reached 6% of GDP in 2003, and was positive to the tune of 2% of GDP until 2009, whilst an increase of taxes on commodity exports in 2002 raised the government's fiscal surplus to around 3% of GDP from 2003 until 2008.[133] After 2008, however, the real exchange rate declined and, in 2015, it had reached almost half of its value in 2003. From 2009 onwards the current account was in deficit, reaching a record of minus US$ 17 billion in 2015. Therefore, by keeping the currency at an undervalued level between 2003 and 2008, there was a one-off boost to foreign competitiveness and an increase of export revenues, but this driver of growth declined after 2008.

Income-supporting policies and the undervalued real exchange rate were the relevant autonomous sources of effective demand in Argentina during the PJ governments. These two sources of demand also drove a cumulative-causation process of growth and income redistribution in the country, similar to that of Brazil. The drive towards exports during the first years reduced, but did not annul, the tendency towards regressive structural change. In this vein, it was shown that the sectors that created the most employment

[132] Data regarding the share of income-sources in household income from the EPH-Cs.

[133] Balance-of-payments data from INDEC, fiscal data from the Ministry of Finance.

in Argentina between 2003 and 2011 were relatively low-wage, low-productivity, non-capital-intensive activities.[134] The association between employment-creation and these three regressive characteristics was stronger after 2011, when the economy stagnated, but it was also present during the growth and redistribution years of 2003-2011.

Chapter 6 showed that the redistribution of income that occurred was more intense and included more factors than in Brazil, but it was also driven in large measure by the regressive structural change. The Gini index of household per capita income in Argentina fell by around 0.11 between 2003 and 2011, and then fluctuated without a clear trend until the end of the Kirchner administrations.[135] It was shown that low-skilled labour formalisation contributed with a decrease of 0.023 in the Gini index, and the fall in the relative income of professional workers with a further decrease of 0.039. Differently from Brazil, there was also evidence that the profits of employers, particularly small ones, were squeezed from around 2007 until 2011. Changes to the size and relative income of all fractions, which constitute the core of the regressive structural change dynamics, together explained around two thirds of the equalisation of income during the Kirchner governments.

This thesis also argued that the growth and redistribution process in Argentina had inflationary pressures that the policy framework was unable to contain, and that the balance-of-trade dynamics pointed to an eventual deficit even when the real exchange was undervalued. In this vein, it showed that imports outgrew exports every year from 2003 until 2008, driven mostly by rising quantities, whereas the growth of exports was mainly caused by rising international prices. By 2008, the value of imports was 4.1 times higher than in 2003, whereas exports were 2.3 times higher.[136] Meanwhile, inflation rose from a year-over-year rate of 2.7%, in January 2004, to 12.1% in January 2006. From 2008 until 2011, inflation remained around 15 to 25%, and the different policies implemented were incapable of reducing it substantially.

The Argentinean government was faced with rising current-account deficits and high inflation from 2009 onwards, leading to a similar dilemma as in Brazil. Depreciating the currency could improve the balance-of-trade, but risked a spiralling process of depreciations increasing inflation and requiring further devaluations to stabilise the real exchange rate at a low level. The government held back controlled prices and offered larger and larger subsidies to fuel and public utilities, but at rising fiscal costs and with limited efficacy in controlling overall inflation. The key issue that indicates the inability of the government to effectively stabilise prices was that, between 2004 and 2015, there was no

[134] Based on data from National Accounts. See Appendix 6.

[135] All data related to inequality based on the EPH-Cs.

[136] Data from INDEC.

period with stable inflation, real wage gains and a constant real exchange rate. Finally, the policy framework in place became ineffective after 2012, as inflation continued at high levels, the current account deteriorated, and growth and redistribution stagnated.

Ultimately, the development strategies of the PT and of the PJ were incapable to confront the constraints that were tightened during the period of growth and redistribution. At the heart of the inability to sustain accumulation and distribution into the 2010s were the contradictory dynamics of the regressive structural change in these economies. On the one hand, growing demand for low-skilled labour reduced inequality and drove growth. On the other hand, the rise of low-productivity sectors created jobs of poor quality, prevented an upgrading of the countries' insertion into the world market and, finally, made the balance-of-payments maintain a long-term dependence on high international commodity prices. Going forward, this suggests the need for a broader approach both to fight inequality, through mechanisms that extend beyond the labour market, and to promote a progressive structural change of the economies.

7.6. Avenues for future research

This thesis has investigated the redistribution of income and changes to class inequality during the Pink Tide, which suggests (at least) three avenues for further research. First, further works can extend the framework developed in this thesis to explore the gendered and racialised dimensions of class inequality. Although this thesis has adopted a 'colour- and gender-blind' approach, the results obtained can inform, and in turn be enriched by, an investigation of the embodied dimensions of inequality and their evolution. In this regard, all of the drivers of redistribution this thesis has identified are not neutral in gender or racial terms, but rather highly selective. It is to be expected that these processes benefited women, ethnic minorities and women of ethnic minorities, given that these groups are more likely than white men to receive wages attached to the MW, to be in precarious positions in the labour market, to receive CCTs, and to perform (paid and unpaid) social reproduction activities (Ávila and Portes 2012, Guimarães 2002, Hoffman and Centeno 2003, Kabeer and Santos 2017, Lima 2012, Reis 2017, Rezende and Lima 2004). Did the redistribution of income during the Pink Tide also reconfigure class inequality across gender and race lines? And if so, how did this impact class, racial and gender relations?

A second avenue of research is to go beyond the distribution of income. Multidimensional poverty and inequality is a growing research agenda, driven by the recognition that the life-chances and wellbeing of individuals and groups are not solely a function of income, but also depend on the wider systems that provide and regulate the access to goods, services and resources (Alkire and Foster 2011, Braig *et al.* 2015, Burchardt and Vizard

2011, Crow *et al.* 2009, Lustig 2011, McKnight 2018, Ravallion 2011). This thesis has focused on *income* inequality, from a class perspective. However, during the PT and PJ governments there were important changes to the provision of, amongst other public goods and services, health, education and housing (Carvalho 2013, 2014b, Grugel and Riggirozzi 2018, López and Cantamutto 2013, Lustig and Pessino 2014, Maricato 2013, Mendes and Weiller 2015, Ocké-Reis and Gama 2016, Rolnik *et al.* 2015). These changes might have affected the distribution of resources, well-being, and life-chances in a progressive or regressive way, thus reinforcing or offsetting the observed redistribution of income, which suggests the relevance of adopting a multidimensional approach to inequality. Did the development strategies of the PT and the PJ transform multidimensional inequality in other directions or dimensions that a focus on the distribution of income does not reveal?

Finally, a crucial research question suggested by the results of this thesis is political. A central conclusion was that the development strategies of the PT and the PJ became incapable of driving further decreases of inequality and destitution in the first years of the 2010s, as the different policy frameworks could not overcome the economies' constraints. This thesis has also indicated the dynamics of these constraints, the drivers of growth and of redistribution, and the social groups that benefited and lost the most from the overall pattern of accumulation. Further research could build upon these results to address the question of *why* other tools were not added to these policy frameworks, investigating the political reasons that prevented the adoption of potentially more efficacious strategies to reduce inequality. Did the political alliances of the PT and the PJ, and the relationship these parties established with class entities and social movements, inherently prevent further social gains under a less permissive international scenario? The Pink Tide has ebbed, but forces intent on bringing about more equitable societies in Latin America have much to learn from the advances, and perhaps especially from the shortcomings, of the recent wave of left-of-centre governments.

Appendix 1: Expressions for the impact on components of the ANOGI decomposition

Expressions for the impact on components of the ANOGI decomposition due to marginal changes in the population-share of group *i*:

$$\frac{\partial G}{\partial \theta_i} = \frac{1}{1-p_i}\left(G_i^C + G_i^O - \left(\eta_i + 1\right)G\right) \tag{1.17}$$

$$\text{where } G_i^O = \sum_{h=1}^{k} p_h\left(\eta_h G_h O_{ih} + 2\dot{\eta}_h \dot{F}_{ih}\right)$$

$$\frac{\partial G_{IG}}{\partial \theta_i} = \frac{1}{1-p_i}\left[\eta_i\left(G_i - G_{IG}\right)\right] \tag{1.18}$$

$$\frac{\partial G_{IGO}}{\partial \theta_i} = \frac{1}{1-p_i}\left(G_{IGO_i}^C + G_{IGO_i}^O - \left(\eta_i + 1\right)G_{IGO}\right) \tag{1.19}$$

$$\text{where } G_{IGO_i}^C = \left(\eta_i G_i\left(O_i - 1\right)\right), G_{IGO_i}^O = \sum_{h=1}^{k} p_h\left(\eta_h G_h\left(O_{ih} - 1\right)\right)$$

$$\frac{\partial G_B}{\partial \theta_i} = \frac{1}{1-p_i}\left(G_{B_i}^C + G_{B_i}^O - \left(\eta_i + 1\right)G_B\right) \tag{1.20}$$

$$\text{where } G_{B_i}^C = 2\dot{\eta}_i \dot{F}_{Ui}, G_{B_i}^O = 2\sum_{h=1}^{k} p_h\left(\dot{\eta}_h \dot{F}_{ih}\right)$$

$$\frac{\partial G_{WO}}{\partial \theta_i} = \frac{1}{1-p_i}\left(G_{WO_i}^C + G_{WO_i}^O - \left(\eta_i + 1\right)G_{WO}\right) \tag{1.21}$$

$$\text{where } G_{WO_i}^C = \left(\eta_i G_i O_i\right), G_{WO_i}^O = \sum_{h=1}^{k} p_h\left(\eta_h G_h O_{ih}\right)$$

Expressions for the impact on components of the ANOGI decomposition due to marginal changes in the relative income of group *i*:

$$\frac{\partial G}{\partial \varepsilon_i} = p_i \eta_i \sum_{h=1}^{k} p_h \eta_h \left[\left(G_i O_i - G_h O_h \right) + 2 \left(F_{Ui} - F_{Uh} \right) \right] \tag{1.22}$$

$$\frac{\partial G_{IG}}{\partial \varepsilon_i} = p_i \eta_i \sum_{h=1}^{k} p_h \eta_h \left(G_i - G_h \right) \tag{1.23}$$

$$\frac{\partial G_{IGO}}{\partial \varepsilon_i} = p_i \eta_i \sum_{h=1}^{k} p_h \eta_h \left[\left(G_i O_i - G_h O_h \right) - \left(G_i - G_h \right) \right] \tag{1.24}$$

$$\frac{\partial G_B}{\partial \varepsilon_i} = p_i \eta_i 2 \sum_{h=1}^{k} p_h \eta_h \left(F_{Ui} - F_{Uh} \right) \tag{1.25}$$

$$\frac{\partial G_{WO}}{\partial \varepsilon_i} = p_i \eta_i \sum_{h=1}^{k} p_h \eta_h \left(G_i O_i - G_h O_h \right) \tag{1.26}$$

Appendix 2: Macroeconomic data for Brazil

Table A2.1 Yearly absolute contribution of different sources of demand to the growth rate of GDP in Brazil, 2001-2014

Year	Household consumption	Government consumption	Investment	Exports	Imports	**Total GDP growth rate**
2001	0.5	0.5	-0.1	0.9	-0.4	**1.4**
2002	0.7	0.7	-1.3	0.8	1.9	**3.1**
2003	-0.3	0.3	-0.5	1.6	0.1	**1.1**
2004	2.4	0.7	1.7	2.2	-1.3	**5.8**
2005	2.6	0.4	-0.4	1.6	-1.0	**3.2**
2006	3.2	0.7	1.5	0.7	-2.1	**4.0**
2007	3.9	0.8	2.8	0.9	-2.3	**6.1**
2008	3.8	0.4	2.8	0.1	-2.0	**5.1**
2009	2.5	0.6	-3.1	-1.3	1.0	**-0.1**
2010	3.8	0.8	5.4	1.3	-3.8	**7.5**
2011	2.9	0.4	1.2	0.5	-1.1	**4.0**
2012	2.1	0.4	-0.6	0.0	-0.1	**1.9**
2013	2.1	0.3	1.3	0.3	-0.9	**3.0**
2014	1.4	0.2	-1.2	-0.1	0.3	**0.5**

Note: Imports present a positive contribution during certain years when their value decrease.
Source: Prepared by the author based on data National Accounts data (base year 2010) from IBGE (2016).

Table A2.2 Value, price and volume indices for exports and imports, Brazil, 2003-2015 (2003 = 100)

Year	Exports, value	Exports, price	Exports, volume	Imports, value	Imports, price	Imports, volume
2003	100.0	100.0	100.0	100.0	100.0	100.0
2004	130.6	110.9	119.1	125.4	109.9	118.3
2005	160.7	124.3	130.2	153.0	122.2	124.6
2006	188.0	139.9	134.6	188.1	130.6	144.7
2007	220.7	154.6	142.0	246.7	141.4	176.5
2008	273.5	195.3	138.5	344.0	172.2	207.8
2009	216.3	169.1	123.6	272.1	153.1	172.7
2010	279.2	203.8	135.3	380.4	159.0	236.5
2011	352.0	251.1	139.3	471.5	181.7	257.6
2012	338.3	238.7	138.8	474.3	183.5	251.7
2013	336.5	231.1	143.1	508.3	181.3	273.5
2014	317.8	218.9	140.5	497.7	177.8	266.7
2015	269.4	171.7	152.1	379.5	156.6	226.5

Note: See notes to Figure 3.4.

Source: Prepared by the author based on data from Ipeadata.

Appendix 3: Distributional data for Brazil

Table A3.1 Shares of different income-sources in total household income, Brazil, 1992-2013

Year	LEI	SEI	PRO	LSF	LSI	PEN	SSB	OTH
1992	0.029	0.086	0.199	0.330	0.164	0.137	0.005	0.051
1993	0.029	0.088	0.200	0.320	0.168	0.140	0.005	0.051
1995	0.030	0.092	0.203	0.301	0.172	0.148	0.004	0.051
1996	0.030	0.092	0.204	0.292	0.173	0.154	0.003	0.051
1997	0.030	0.092	0.203	0.286	0.174	0.159	0.003	0.051
1998	0.030	0.092	0.202	0.282	0.175	0.164	0.003	0.051
1999	0.030	0.091	0.199	0.280	0.175	0.170	0.004	0.050
2001	0.030	0.089	0.193	0.282	0.174	0.179	0.006	0.047
2002	0.030	0.088	0.190	0.283	0.172	0.184	0.007	0.046
2003	0.030	0.086	0.188	0.284	0.171	0.189	0.008	0.045
2004	0.029	0.085	0.184	0.287	0.170	0.192	0.010	0.043
2005	0.029	0.083	0.182	0.292	0.168	0.194	0.011	0.041
2006	0.028	0.081	0.181	0.298	0.165	0.194	0.012	0.040
2007	0.028	0.079	0.181	0.303	0.162	0.195	0.014	0.038
2008	0.027	0.077	0.182	0.308	0.159	0.195	0.015	0.036
2009	0.027	0.074	0.185	0.313	0.156	0.195	0.016	0.035
2011	0.026	0.069	0.191	0.321	0.149	0.194	0.017	0.033
2012	0.026	0.066	0.194	0.326	0.145	0.193	0.018	0.031
2013	0.026	0.063	0.198	0.330	0.141	0.192	0.019	0.031

Notes: Lowess smoothing applied. LEI: large employers' income; SEI: small employers' income; PRO: professional labour; LSF: low-skilled, formal labour; LSI: low-skilled, informal labour; PEN: pensions; SSB: social security benefits; OTH: other sources. See chapter 2 for the definition of class positions and the income associated to them. Pensions include private and public pensions. Social security benefits include all values below 2 minimum wages of the variable 'interest on savings or other financial investments, social security benefits or other forms of income' (for a similar procedure validated through the use of other data sources, see Hoffmann 2013b) and other variables related to social security benefits, which together are expected to incorporate BPC and the CCT scheme PBF. Other sources include real estate rents, donations, labour income of non-classified individuals, and values above two MWs of the variable 'interest on savings or savings or other financial investments, social security benefits or other forms of income'.

Source: Prepared by the author based on data from the PNADs.

Table A3.2 Progressivity (overall Gini minus concentration index) of different income-sources relative to total household per capita income in Brazil, 1992-2013

Year	LEI	SEI	PRO	LSF	LSI	PEN	SSB	OTH
1992	-0.347	-0.221	-0.256	0.074	0.373	0.016	0.017	-0.167
1993	-0.347	-0.225	-0.254	0.080	0.364	0.015	0.031	-0.155
1995	-0.348	-0.232	-0.253	0.092	0.353	0.012	0.087	-0.135
1996	-0.349	-0.234	-0.253	0.097	0.349	0.009	0.134	-0.128
1997	-0.350	-0.236	-0.255	0.101	0.346	0.006	0.194	-0.123
1998	-0.352	-0.238	-0.257	0.103	0.342	0.003	0.258	-0.120
1999	-0.354	-0.240	-0.261	0.105	0.340	0.000	0.323	-0.119
2001	-0.361	-0.244	-0.270	0.105	0.337	-0.007	0.451	-0.122
2002	-0.365	-0.246	-0.274	0.105	0.335	-0.010	0.510	-0.125
2003	-0.369	-0.248	-0.279	0.106	0.334	-0.013	0.583	-0.127
2004	-0.373	-0.251	-0.283	0.105	0.331	-0.015	0.636	-0.132
2005	-0.379	-0.254	-0.288	0.104	0.328	-0.016	0.675	-0.137
2006	-0.385	-0.258	-0.291	0.103	0.325	-0.016	0.701	-0.144
2007	-0.391	-0.263	-0.294	0.103	0.321	-0.014	0.720	-0.152
2008	-0.397	-0.267	-0.297	0.104	0.318	-0.014	0.737	-0.160
2009	-0.402	-0.272	-0.298	0.106	0.313	-0.010	0.752	-0.168
2011	-0.412	-0.284	-0.300	0.110	0.303	-0.003	0.783	-0.186
2012	-0.416	-0.291	-0.300	0.112	0.298	0.001	0.800	-0.195
2013	-0.420	-0.300	-0.300	0.115	0.293	0.007	0.817	-0.204

Notes: See notes to Table A3.1.

Source: Prepared by the author based on data from the PNADs.

Table A3.3 Concentration index of different income-sources relative to total household per capita income in Brazil, 1992-2013

Year	LEI	SEI	PRO	LSF	LSI	PEN	SSB	OTH
1992	0.937	0.811	0.846	0.516	0.218	0.575	0.574	0.757
1993	0.940	0.818	0.847	0.513	0.229	0.577	0.562	0.748
1995	0.944	0.828	0.849	0.504	0.242	0.584	0.509	0.731
1996	0.945	0.830	0.850	0.499	0.247	0.587	0.462	0.724
1997	0.946	0.832	0.851	0.495	0.250	0.590	0.402	0.719
1998	0.946	0.832	0.852	0.491	0.252	0.591	0.337	0.715
1999	0.947	0.832	0.853	0.488	0.253	0.593	0.269	0.711
2001	0.946	0.829	0.855	0.480	0.249	0.592	0.134	0.707
2002	0.946	0.827	0.855	0.476	0.246	0.591	0.070	0.706
2003	0.946	0.825	0.856	0.472	0.243	0.590	-0.006	0.704
2004	0.945	0.823	0.855	0.467	0.241	0.587	-0.064	0.704
2005	0.945	0.820	0.854	0.463	0.238	0.582	-0.109	0.704
2006	0.945	0.818	0.851	0.457	0.235	0.576	-0.141	0.704
2007	0.945	0.817	0.848	0.451	0.233	0.568	-0.166	0.706
2008	0.944	0.815	0.844	0.444	0.230	0.561	-0.189	0.707
2009	0.944	0.814	0.840	0.436	0.229	0.552	-0.210	0.710
2011	0.943	0.816	0.831	0.421	0.228	0.534	-0.252	0.717
2012	0.943	0.818	0.827	0.414	0.228	0.525	-0.274	0.722
2013	0.942	0.822	0.822	0.407	0.230	0.516	-0.295	0.727

Notes: See notes to Table A3.1.

Source: Prepared by the author based on data from the PNADs.

Table A3.4 Basic results of the ANOGI decomposition by class positions of household per capita income inequality in Brazil, 1992-2013

Year	Gt	Gwo	Gb	IG	IGO	Gbp	Gb - Gbp
1992	0.594	0.396	0.197	0.512	-0.116	0.335	-0.137
1993	0.596	0.395	0.201	0.512	-0.117	0.337	-0.136
1995	0.599	0.393	0.206	0.512	-0.119	0.340	-0.134
1996	0.600	0.392	0.208	0.511	-0.119	0.341	-0.134
1997	0.599	0.391	0.208	0.510	-0.119	0.341	-0.133
1998	0.598	0.390	0.208	0.508	-0.118	0.340	-0.132
1999	0.596	0.389	0.207	0.506	-0.118	0.338	-0.131
2001	0.588	0.386	0.202	0.501	-0.115	0.331	-0.129
2002	0.583	0.384	0.199	0.498	-0.113	0.327	-0.128
2003	0.579	0.383	0.196	0.495	-0.112	0.324	-0.127
2004	0.574	0.382	0.193	0.491	-0.110	0.319	-0.126
2005	0.568	0.380	0.188	0.487	-0.107	0.313	-0.125
2006	0.562	0.377	0.185	0.482	-0.105	0.308	-0.123
2007	0.556	0.375	0.181	0.478	-0.103	0.303	-0.122
2008	0.549	0.372	0.177	0.473	-0.101	0.297	-0.120
2009	0.544	0.370	0.174	0.469	-0.099	0.292	-0.119
2011	0.533	0.365	0.168	0.461	-0.096	0.283	-0.115
2012	0.528	0.362	0.166	0.458	-0.095	0.279	-0.114
2013	0.524	0.360	0.164	0.454	-0.095	0.276	-0.112

Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions.

Source: Prepared by the author based on data from the PNADs.

Table A3.5 Results of the ANOGI decomposition by class positions of household per capita income inequality in Brazil, 1992, 2002, 2008 and 2013

Class position	Year	p_i	η_i	G_i	O_i	F_{Ui}	$\frac{\partial G}{\partial \theta_i}$	$\frac{\partial G}{\partial \varepsilon_i}$	$\frac{\partial G}{s_i \partial \varepsilon_i}$
Large employers	1992	0.007	5.487	0.557	0.317	0.881	1.101	0.013	0.345
	2002	0.006	5.801	0.499	0.242	0.912	1.208	0.013	0.363
	2008	0.006	5.471	0.511	0.251	0.908	1.276	0.013	0.394
	2013	0.006	5.452	0.535	0.248	0.906	1.419	0.013	0.420
Small Employers	1992	0.048	2.245	0.538	0.649	0.732	0.112	0.024	0.219
	2002	0.046	2.385	0.523	0.605	0.754	0.147	0.026	0.240
	2008	0.042	2.264	0.503	0.612	0.751	0.159	0.025	0.260
	2013	0.033	2.352	0.501	0.586	0.761	0.226	0.023	0.292
Professional workers	1992	0.083	2.750	0.518	0.551	0.784	0.228	0.059	0.260
	2002	0.075	2.895	0.501	0.523	0.800	0.278	0.060	0.279
	2008	0.075	2.747	0.489	0.538	0.795	0.302	0.062	0.304
	2013	0.088	2.437	0.486	0.587	0.772	0.261	0.066	0.305
Formal, low-skilled workers	1992	0.388	0.947	0.476	0.837	0.562	-0.168	-0.026	-0.072
	2002	0.360	0.908	0.454	0.834	0.556	-0.169	-0.030	-0.093
	2008	0.391	0.916	0.430	0.851	0.547	-0.169	-0.032	-0.090
	2013	0.425	0.901	0.404	0.865	0.536	-0.178	-0.039	-0.103
Informal, low-skilled workers	1992	0.388	0.491	0.518	1.000	0.361	0.021	-0.067	-0.354
	2002	0.399	0.545	0.505	1.003	0.383	-0.008	-0.067	-0.311
	2008	0.360	0.587	0.478	1.005	0.386	-0.013	-0.063	-0.297
	2013	0.302	0.625	0.458	1.006	0.391	-0.017	-0.053	-0.281
Workers for self-consumption	1992	0.029	0.568	0.593	1.079	0.370	0.039	-0.003	-0.213
	2002	0.031	0.529	0.586	1.090	0.345	0.053	-0.004	-0.254
	2008	0.035	0.513	0.559	1.073	0.328	0.067	-0.005	-0.294
	2013	0.038	0.444	0.554	1.062	0.279	0.108	-0.006	-0.378
Unemployed or inactive	1992	0.015	0.229	0.889	1.414	0.119	0.308	-0.000	-0.099
	2002	0.021	0.224	0.844	1.308	0.124	0.294	-0.001	-0.228
	2008	0.023	0.195	0.796	1.162	0.114	0.310	-0.002	-0.394
	2013	0.028	0.141	0.791	1.023	0.086	0.356	-0.002	-0.543
Pensioners	1992	0.043	1.176	0.589	0.930	0.545	0.000	0.002	0.044
	2002	0.062	1.143	0.582	0.945	0.536	0.003	0.003	0.039
	2008	0.068	1.132	0.533	0.926	0.545	-0.014	0.003	0.033
	2013	0.080	1.031	0.487	0.933	0.530	-0.038	-0.001	-0.009

Notes: Lowess smoothing applied. See chapter 2 for the formulas and definitions of the concepts and class positions.

Source: Prepared by the author based on data from the PNADs. The last three columns refer to the sensitivity of inequality to changes in the size of class fractions, to changes in the relative income of class fractions, and to changes in the relative income of class fractions adjusted for their income-share.

Appendix 4: Macroeconomic data for Argentina

Table A4.1 Current account, real effective exchange rate index, inflation rate, primary fiscal surplus, terms-of-trade index and GDP growth rate for Argentina, 1995-2015

Year	Current account (% of GDP)	Real effective exchange rate index (2003 = 100)	Inflation (year-over-year rate)	Primary fiscal result (% of GDP)	Terms of trade (2003 = 100)	**Real GDP growth (annual %)**
1995	-2.0	54.7	3.4	1.1	93.9	**-2.8**
1996	-2.5	55.8	0.2	-0.3	98.1	**5.5**
1997	-4.1	54.2	0.5	0.5	96.1	**8.1**
1998	-4.8	52.2	0.9	0.9	90.6	**3.9**
1999	-4.2	47.6	-1.2	1.2	84.5	**-3.4**
2000	-3.2	47.9	-0.9	1.0	92.2	**-0.8**
2001	-1.4	45.7	-1.1	0.5	90.7	**-4.4**
2002	8.7	108.5	25.9	0.7	92.1	**-10.9**
2003	6.4	100.1	13.4	2.3	100.0	**8.8**
2004	2.0	104.0	4.4	3.6	106.9	**9.0**
2005	2.6	105.4	9.6	3.4	103.5	**8.9**
2006	2.8	107.9	10.9	3.2	108.2	**8.0**
2007	2.1	103.9	16.5	2.9	114.6	**9.0**
2008	1.5	94.0	24.1	2.8	128.9	**4.1**
2009	2.2	91.2	17.1	1.4	129.7	**-5.9**
2010	-0.4	83.8	23.7	1.5	134.3	**10.1**
2011	-1.0	77.4	24.8	0.2	148.2	**6.0**
2012	-0.4	65.7	25.9	-0.2	154.4	**-1.0**
2013	-2.1	65.4	20.9	-0.7	144.4	**2.4**
2014	-1.5	69.9	38.6	-0.8	141.3	**-2.5**
2015	-2.7	54.7	27.1	-3.8	135.0	**2.6**

Notes: The real effective exchange rate is the broad effective exchange rate the BIS provides, which weights nominal bilateral exchange rates by trade flows between 61 countries and deflates them by corresponding price indices. The version used throughout this thesis substitutes the deflator used for the Argentinean economy for the Pricestat deflator, which corrects for the post-2007 unreliability of the official Consumer Price Index. The real exchange rate is defined in terms of local currency units per foreign currency (a decrease means an appreciation of the domestic currency). The terms of trade are defined as the price of exports divided by the price of imports (a decrease means imports become dearer relative to exports). Primary fiscal result of the National Public Sector.

Source: Prepared by the author based on data from INDEC (current account, GDP, terms of trade), BIS (exchange rate), Pricestat (inflation), and Ministerio de la Hacienda (primary fiscal result).

Table A4.2 Annual contribution of different sources of demand to the growth rate of GDP in Argentina, 1994-2015

Year	Household consumption	Investment	Government consumption	Exports	Imports	**Total GDP growth rate**
1994	4.1	3.1	0.1	1.9	-3.2	**5.8**
1995	-3.0	-4.7	0.1	3.0	1.7	**-2.8**
1996	3.7	3.2	0.3	1.3	-2.8	**5.5**
1997	6.0	4.6	0.4	2.1	-4.9	**8.1**
1998	2.3	1.1	0.4	1.9	-1.8	**3.9**
1999	-1.3	-4.6	0.3	-0.2	2.5	**-3.4**
2000	-0.4	-1.0	0.1	0.5	0.0	**-0.8**
2001	-3.9	-3.6	-0.2	0.5	2.8	**-4.4**
2002	-9.6	-10.6	-0.6	0.7	9.3	**-10.9**
2003	5.3	5.7	0.2	1.5	-3.8	**8.8**
2004	6.1	6.0	0.3	2.0	-5.3	**9.0**
2005	4.8	2.6	1.1	3.1	-2.7	**8.9**
2006	7.0	1.3	0.4	1.4	-2.0	**8.0**
2007	6.1	3.7	0.8	2.0	-3.6	**9.0**
2008	4.7	1.4	0.5	0.2	-2.7	**4.1**
2009	-3.6	-4.8	0.6	-2.2	4.1	**-5.9**
2010	7.6	5.5	0.7	3.1	-6.7	**10.1**
2011	6.4	3.3	0.5	1.0	-5.2	**6.0**
2012	0.8	-2.5	0.3	-0.9	1.3	**-1.0**
2013	2.6	0.9	0.6	-0.8	-1.0	**2.4**
2014	-3.2	-1.3	0.4	-1.4	3.0	**-2.5**
2015	2.5	0.7	0.9	-0.1	-1.4	**2.6**

Notes: Investment includes stocks variations and errors. Imports present a positive contribution during certain years when their value decrease.

Source: Prepared by the author based on data from INDEC.

Table A4.3 Index of real GDP components in Argentina, 1993-2015 (1998 = 100)

Year	Household consumption	Investment	Government consumption	Exports	Imports	Total GDP growth rate
1993	82.8	75.8	90.6	53.0	56.6	82.1
1994	87.9	85.6	91.1	61.1	68.6	86.9
1995	84.0	69.8	91.7	74.9	61.9	84.4
1996	88.7	80.2	93.7	80.6	72.7	89.1
1997	96.6	96.0	96.8	90.4	92.2	96.3
1998	100.0	100.0	100.0	100.0	100.0	100.0
1999	98.0	82.1	102.6	98.7	88.7	96.6
2000	97.4	78.5	103.2	101.4	88.6	95.9
2001	91.8	65.1	101.1	104.2	76.6	91.6
2002	78.6	27.2	95.9	107.4	38.2	81.6
2003	85.0	45.5	97.3	113.8	52.3	88.9
2004	93.1	66.2	100.0	123.1	73.6	96.9
2005	100.0	76.0	109.8	138.9	85.2	105.5
2006	110.9	81.2	113.9	146.7	94.6	113.9
2007	121.3	97.7	122.9	158.7	113.2	124.2
2008	130.1	104.2	129.0	159.8	128.5	129.2
2009	123.0	80.2	136.3	144.9	104.9	121.6
2010	136.8	106.3	143.7	165.0	141.8	133.9
2011	149.6	123.4	150.3	171.9	173.0	142.0
2012	151.3	109.6	154.8	164.8	164.8	140.5
2013	156.8	114.7	163.0	159.0	171.2	143.9
2014	150.0	107.6	167.8	147.9	151.6	140.3
2015	155.3	111.5	179.2	147.1	160.2	144.0

Notes: Investment includes stocks variations and errors.

Source: Prepared by the author based on data from INDEC.

Appendix 5: Distributional data for Argentina

Table A5.1 Shares of different income-sources in total household income, Argentina, 2003-2014

Year	ECI	PRO	LSF	LSI	PEN	SSB	OTH
2003	0.092	0.189	0.287	0.213	0.139	0.034	0.046
2004	0.089	0.172	0.305	0.210	0.133	0.030	0.062
2005	0.088	0.161	0.323	0.205	0.129	0.025	0.067
2006	0.087	0.156	0.338	0.201	0.128	0.022	0.068
2007	0.085	0.155	0.351	0.195	0.129	0.020	0.066
2008	0.082	0.155	0.362	0.190	0.131	0.018	0.062
2009	0.077	0.155	0.370	0.186	0.135	0.017	0.060
2010	0.071	0.153	0.376	0.184	0.140	0.016	0.059
2011	0.065	0.149	0.381	0.183	0.145	0.016	0.061
2012	0.059	0.145	0.385	0.182	0.151	0.016	0.062
2013	0.053	0.141	0.388	0.182	0.157	0.017	0.063
2014	0.048	0.135	0.390	0.179	0.162	0.019	0.067

Notes: Lowess smoothing applied. The values are the average for the quarters of the year (in 2003, data are only available for the last two quarters, and in 2007 there is no data for the third quarter). ECI: employers' and capital income; PRO: professional labour; LSF: low-skilled, formal labour; LSI: low-skilled, informal labour; PEN: pensions; SSB: social security benefits; OTH: other sources. See chapter 2 for the definition of class positions and the income associated to them. Employer and capital income includes income derived from financial assets, from real estate rents, and from businesses in which the individual did not work; pensions include private and public pensions; social security benefits include employment-severance benefits, unemployment benefits, other forms of monetary subsidies or benefits, studentship stipends, and the labour income of those who are beneficiaries of PJyJHD; other sources include donations, in-kind transfers, and other forms of income not included above.

Source: Prepared by the author based on data from the EPH-C.

Table A5.2 Progressivity (overall Gini minus concentration index) of different income-sources relative to total household per capita income in Argentina, 2003-2014

Year	ECI	PRO	LSF	LSI	PEN	SSB	OTH
2003	-0.273	-0.268	0.015	0.227	-0.014	0.596	0.120
2004	-0.271	-0.270	0.012	0.235	-0.001	0.631	0.034
2005	-0.274	-0.271	0.010	0.243	0.014	0.628	-0.011
2006	-0.273	-0.273	0.010	0.250	0.029	0.578	-0.035
2007	-0.271	-0.275	0.011	0.257	0.042	0.516	-0.045
2008	-0.265	-0.278	0.011	0.262	0.050	0.467	-0.046
2009	-0.254	-0.281	0.009	0.265	0.054	0.437	-0.051
2010	-0.239	-0.283	0.004	0.267	0.050	0.437	-0.057
2011	-0.228	-0.283	-0.002	0.268	0.042	0.465	-0.063
2012	-0.219	-0.282	-0.007	0.269	0.031	0.487	-0.068
2013	-0.212	-0.279	-0.011	0.271	0.015	0.483	-0.067
2014	-0.215	-0.276	-0.012	0.274	-0.002	0.459	-0.072

Notes: See notes to Table A5.1.

Source: Prepared by the author based on data from the EPH-Cs.

Table A5.3 Concentration index of different income-sources relative to total household per capita income in Argentina, 2003-2014

Year	ECI	PRO	LSF	LSI	PEN	SSB	OTH
2003	0.801	0.796	0.513	0.302	0.542	-0.068	0.408
2004	0.782	0.781	0.499	0.275	0.512	-0.120	0.476
2005	0.769	0.767	0.485	0.252	0.481	-0.133	0.506
2006	0.755	0.755	0.471	0.232	0.453	-0.096	0.517
2007	0.741	0.746	0.460	0.214	0.429	-0.045	0.515
2008	0.726	0.739	0.450	0.199	0.411	-0.006	0.507
2009	0.706	0.733	0.443	0.187	0.398	0.015	0.502
2010	0.682	0.726	0.439	0.176	0.393	0.006	0.500
2011	0.663	0.719	0.437	0.167	0.393	-0.030	0.499
2012	0.648	0.710	0.436	0.159	0.398	-0.059	0.497
2013	0.636	0.703	0.435	0.153	0.409	-0.059	0.490
2014	0.637	0.697	0.433	0.148	0.423	-0.037	0.494

Notes: See notes to Table A5.1.

Source: Prepared by the author based on data from the EPH-Cs.

Table A5.4 Basic results of the ANOGI decomposition by class positions of household per capita income inequality in Argentina, 2003-2014

Year	Total Gini	Gwo	Gb	IG	IGO	Gbp	Gb - Gbp
2003	0.527	0.383	0.144	0.465	-0.081	0.265	-0.120
2004	0.508	0.376	0.132	0.448	-0.073	0.245	-0.113
2005	0.492	0.370	0.122	0.436	-0.066	0.230	-0.108
2006	0.479	0.365	0.113	0.426	-0.061	0.217	-0.104
2007	0.468	0.362	0.106	0.418	-0.056	0.207	-0.101
2008	0.459	0.359	0.100	0.412	-0.053	0.199	-0.099
2009	0.450	0.356	0.094	0.405	-0.049	0.190	-0.096
2010	0.441	0.353	0.088	0.399	-0.046	0.182	-0.094
2011	0.433	0.350	0.083	0.393	-0.043	0.174	-0.091
2012	0.426	0.347	0.079	0.388	-0.041	0.168	-0.089
2013	0.420	0.344	0.076	0.383	-0.039	0.163	-0.086
2014	0.417	0.341	0.076	0.380	-0.039	0.161	-0.085

Notes: Lowess smoothing applied. The values are the average for the quarters of the year (in 2003, data are only available for the last two quarters, and in 2007 there is no data for the third quarter). See chapter 2 for the formulas and definitions of the concepts and class positions.

Source: Prepared by the author based on data from the EPH-Cs.

Table A5.5 Results of the ANOGI decomposition by class positions of household per capita income inequality in Argentina, 2003, 20006, 2011 and 2014

Class position	Year	p_i	η_i	G_i	O_i	F_{Ui}	$\frac{\partial G}{\partial \theta_i}$	$\frac{\partial G}{\partial \varepsilon_i}$	$\frac{\partial G}{s_i \partial \varepsilon_i}$
Large employers	2003	0.005	2.700	0.507	0.673	0.753	0.342	0.004	0.318
	2006	0.005	2.772	0.442	0.573	0.797	0.407	0.005	0.369
	2011	0.005	2.242	0.429	0.701	0.747	0.303	0.004	0.364
	2014	0.004	2.141	0.447	0.744	0.728	0.310	0.003	0.376
Small Employers	2003	0.037	1.763	0.485	0.802	0.675	0.052	0.014	0.212
	2006	0.043	1.743	0.457	0.795	0.678	0.086	0.018	0.239
	2011	0.043	1.367	0.424	0.894	0.609	0.028	0.010	0.164
	2014	0.036	1.263	0.424	0.949	0.577	0.030	0.006	0.140
Professional workers	2003	0.088	2.418	0.482	0.585	0.767	0.214	0.062	0.288
	2006	0.080	2.061	0.413	0.621	0.758	0.119	0.048	0.293
	2011	0.081	1.860	0.375	0.658	0.744	0.095	0.046	0.302
	2014	0.080	1.759	0.362	0.702	0.731	0.078	0.042	0.299
Formal, low-skilled workers	2003	0.286	1.094	0.410	0.793	0.593	-0.155	-0.005	-0.017
	2006	0.341	1.090	0.387	0.831	0.577	-0.132	-0.001	-0.003
	2011	0.395	1.080	0.372	0.878	0.559	-0.097	0.005	0.011
	2014	0.409	1.085	0.360	0.883	0.559	-0.094	0.008	0.019
Informal, low-skilled workers	2003	0.445	0.633	0.486	0.996	0.393	0.013	-0.072	-0.258
	2006	0.409	0.668	0.462	1.012	0.383	0.038	-0.067	-0.245
	2011	0.356	0.696	0.421	1.012	0.380	0.038	-0.061	-0.247
	2014	0.348	0.712	0.400	1.003	0.382	0.031	-0.062	-0.252
Unemployed or Inactive	2003	0.058	0.369	0.723	1.188	0.218	0.236	-0.005	-0.232
	2006	0.044	0.415	0.680	1.188	0.217	0.249	-0.004	-0.236
	2011	0.033	0.430	0.655	1.169	0.208	0.271	-0.003	-0.250
	2014	0.034	0.367	0.649	1.107	0.177	0.298	-0.004	-0.344
Pensioners	2003	0.081	1.153	0.460	0.862	0.580	-0.069	0.003	0.030
	2006	0.078	1.085	0.415	0.872	0.560	-0.065	0.000	0.002
	2011	0.086	1.030	0.383	0.909	0.537	-0.050	-0.001	-0.010
	2014	0.089	1.125	0.379	0.906	0.565	-0.035	0.006	0.056

Notes: Lowess smoothing applied. The values are the average for the quarters of the year (in 2003, data are only available for the last two quarters). See chapter 2 for the formulas and definitions of the concepts and class positions. The last three columns refer to the sensitivity of inequality to changes in the size of class fractions, to changes in the relative income of class fractions, and to changes in the relative income of class fractions adjusted for their income-share.

Source: Prepared by the author based on data from the EPH-Cs.

Appendix 6: Procedures for using Argentinean national accounts

6.1. Introduction

Nationally representative data for Argentina on output and employment are, for the period at hand, considerably fragmented. As explained in greater detail below, there are three main issues that need addressing: i) sectoral GDP is available with two base years, with minor changes in the sectoral division; ii) the Generation of Income account is only complete for a subset of years; and iii) employment data are fragmented across a number of non-exhaustive sources for most of the period. In order to examine the drivers of growth in terms of GDP components or institutional sectors – i.e. household consumption, government consumption, investment and exports – it is also necessary to create a linked series of supply and demand. A full description of the available databases and the methods employed to analyse them is provided below, but a short summary follows.

In order to investigate which were the fastest growing sectors, what were their characteristics in terms of wages and productivity, and the extent to which the economy underwent structural change during the period, a series of procedures were carried out. The goal was to obtain data for the sectoral distribution of employment and value added, based on which labour productivity could be calculated, and average employee remuneration by sector. The focus was on the Kirchner administrations (2003-2015), but extending somewhat before and after the period to provide a longer view.

The end-result was a 14-sector database extending from 1993 to 2016, comprising gross added valued and employment (registered occupations, unregistered occupations and

non-employees) for the whole period, and employee remuneration for all but 2008-2015. This draws primarily from national accounts data, using the full data (i.e. gross added value, number and kind of occupations, and income generated) whenever possible and supplementing it with estimates when necessary. Estimations were mainly produced to complement employment data from 2008 to 2015. They were based on the partial data available for registered occupations during this period, which comes from national accounts, and on data from the national household survey EPH-C. The remaining two issues were simpler: the more detailed sectoral division after 2004 was simplified back into the 1993 one (this only involves adding sectors), and the two base years were linked through the standard procedure.

This resulting database was used for most of the analyses of the thesis, and is the relevant one unless otherwise specified. For shorter periods of time, for more restricted topics, or to guarantee the robustness of the results, however, the original databases were also consulted. This allows for both comprehensive analyses, in the longer database, and for more detail whenever possible. The rest of this appendix goes through the detailed procedures employed, sequentially covering the available data, the changes to sectoral divisions, and the imputation method for employment data.

6.2. Data sources

National accounts were used as the main source of data, given their exhaustive coverage of employment patterns and value added at the sectoral level. As indicated above, however, several partial accounts must be made compatible in order to acquire information for the whole period studied. A detailed breakdown of the available data is discussed later in this section, whilst Table A6.1 summarises the availability of the four main variables of interest and the level of the sectoral division. These variables are i) the number of occupations by sector,[137] discriminating between registered employees, unregistered employees and non-employees (the latter comprising both self-employed workers and employers); ii) total employee remuneration by sector; iii) gross added value at producer prices by sector; and iv) supply and demand by institutional sector, distinguishing between domestic production and imports, for the supply side, and between household consumption, government consumption, investment and exports, for the demand side.

[137] The variable refers to the number of occupations, and not of workers, so that a person with multiple enters more than once. For simplicity, throughout the thesis the number of occupations is occasionally referred to as the level of employment, the number of jobs or of workers.

Table A6.1 Available data from Argentinean national accounts, 1993-2017

Variable	Database	Base year			
		1993*		2004	
		1993-2007	2008-2012	2004-2016	2016-2017
Employment	Registered occupations	14 sectors		52 sectors**	16 sectors
	Unreg. occupations	14 sectors			16 sectors
	Non-employees	14 sectors			16 sectors
Employee remuneration		14 sectors		52 sectors**	16 sectors
Gross added value@		14 sectors	14 sectors	52 sectors	16 sectors
Supply and demand		Institutional sector***	Institutional sector***	Institutional sector***	Institutional sector***

Source: prepared by the author.

Notes: *: Data are not reliable after 2007. **: Excludes public employment and domestic labour. ***: Supply is discriminated by domestic production and by imports, whilst demand is split between household consumption, government consumption, investment and exports. @: gross added value by sector is only available at producer prices for the 1993-based series, and at basic prices for the 2004-based series.

As can be seen, the central concern regards employment and remuneration data for the 2008-2015 period. Specifically, there is no information for unregistered workers, non-employees, public servants, or domestic workers of any kind. Other issues regard the sectoral division, which changes in 2004, and the existence of two base-years. The available data are described below in further detail, including that from the EPH, which is used to estimate public employment and domestic labour.

6.2.1. GDP components, 1993 basis (1993-2012) – 14 sectors

This is the basic source of information between 1993 and 2003 for sectoral added value and for supply and demand by institutional sector.

At the aggregate level it contains global supply and demand tables, discriminating between private consumption, government consumption, investment, exports and imports, with corresponding price and quantity indices. From the Generation of Income account (see below), one can also extract aggregate data for gross added value at basic and producer prices, GOS, mixed income, employee remuneration (not differentiating between registered and unregistered) and taxes on goods and services.

At the 14-sectors level, it reports gross added value at producer prices.

It is not reliable after 2006, and the new GDP series (2004 basis) has replaced it since 2004.

6.2.2. Generation of Income account, 1993 basis (1993-2007) – 14 sectors

This is the basic source of information between 1993 and 2007 for employment and remuneration at the sectoral level.

At the aggregate level, it reports employment (registered workers, informal workers, and non-employees), income (employee remuneration, mixed income and GOS), and taxes on goods and services. This also includes an overall division between public and private employment and income, which is not present at the sectoral level.

It brings the same information at the 14-sectors level, with the following differences: it does not differentiate between public and private employment or income (which is particularly relevant for the provision of health and education), and it does not report GOS.

6.2.3. GDP components, 2004 basis (2004-2016) – 16 and 52 sectors

This is the basic source of information between 2004 and 2016 for sectoral added value and for supply and demand by institutional sector.

At the aggregate level it contains global supply and demand tables, discriminating between private consumption, government consumption, investment, exports and imports, with corresponding price and quantity indices. Added value is available at market, producer and basic prices. From the Generation of Income account (see below), exclusively for 2016-2017 one can also extract aggregate data for gross added value at basic and producer prices, GOS, mixed income, employee remuneration (not differentiating between registered and unregistered) and taxes on goods and services.

At the 16- and 52-sectors levels, it includes gross production value and gross added value, at current and constant basic prices, alongside corresponding price and quantity indices.

An issue that cannot be made compatible with the preceding series regards the use of basic or producer prices. The 2004-based data only indicate sectoral added value at basic prices, whereas the 1993-based data only do so at producer prices.

6.2.4. Generation of Income account, 2004 basis (2016-2017) – 16 sectors

In spite of its restricted time-coverage, this is the central source of information for remuneration during the last decade and a key piece to estimate missing employment patterns.

It contains employment (registered workers, informal workers, and non-employees), income (employee remuneration, mixed income, GOS and taxes on goods and services), and gross added value at current basic prices for 16 broad sectors. It differentiates between the public and private provision of health and of education, and is the only source from national accounts to explicitly account for employment as domestic labour.

6.2.5. Registered employment, 2004 basis (2004-2016) –16 and 52 sectors (excludes public employment and domestic labour)

These data are considerably lacking, given they do not encompass any public employment, informal labour or domestic workers. Nevertheless, they are the only source of information from the national accounts on sectoral employment between 2008 and 2015.

The database includes the number of registered employees (thus excluding self-employed, employers and informal workers) and their wages for the private sector only, furthermore excluding domestic workers, at the level of 16 and 52 broad sectors. Differently from the GDP components series, private domestic labour is absent and there is an account for extraterritorial organisations (which is numerically insignificant).

6.2.6. EPH

The EPH were used to estimate the levels of public employment between 2008 and 2015, and of domestic labour from 2003 to 2015. The methodology of the survey had a major change in 2003, but since then has remained substantially constant. For this reason, it was only used from 2003 onwards.

The employment data from national accounts are based on the EPH, but use other sources of information as well, such as sectoral surveys, administrative records and so on. Besides the greater specificity of these other sources, their coverage is superior: although the EPH are nationally representative, they do not encompass the whole territory of Argentina. For these reasons, the number of occupations derived from the EPH are not directly comparable to that of national accounts, a procedure for which is detailed below. Given

these differences in methodology, the EPH are only used as a complement to national accounts when necessary.

The EPH identify, amongst others, the number of occupations an individual has, their sector of employment, their position in the occupation (registered worker,[138] unregistered worker, and non-employee for self-employed and employers), and if their employer is a public or private institution. Given that national accounts record the number of occupations, and not the number persons employed, respondents in the surveys are given weight equal to the number of jobs they hold. Economic activities are classified according to two instalments of the Argentinean version of the Classification of Economic Activities for Household Surveys of MERCOSUR: CAES 0.9 for the 2003-2010 period, and CAES 1.0 from 2011 onwards.

Based on this information, yearly averages (the EPH is run on a quarterly basis) of the following variables were extracted:[139]

1. Employment in public administration: all occupied individuals working the in 'Public administration and defence; compulsory social security' (letter L in CAES 0.9, letter O in CAES 1.0). Given that in national accounts all public employment is recorded either in public administration or in health and education, this also includes individuals who work for a public employer who are not in the health and education sectors. All occupations were considered registered workers, to maintain compatibility with national accounts.
2. Private employment in health and education: occupied individuals who do not work for a public employer, discriminated by their position in the occupation, who work in 'Education' (letter M in CAES 0.9; letter P in CAES 1.0) or 'Social Services and Health' (letter N in CAES 0.9; letter Q in CAES 1.0).
3. Public employment in health and education: same as above, but only individuals who work for a public employer. All occupations were considered registered workers, to maintain compatibility with national accounts.
4. Domestic labour: all occupied individuals who perform domestic labour for private households. To guarantee the compatibility with national accounts data, all domestic workers were considered employees (i.e. there are no self-employed). Furthermore, the number of private households for which an individual worked was used as their number of occupations.

[138] This is considered positive if the employer makes the mandatory contribution to the worker's pension.

[139] Given the quarterly periodicity of the EPH, the values are yearly averages.

6.3. The change in sectoral divisions

There was a change in the sectoral classification of national accounts when the base year changed. The highest-level classification went from 14 to 16 sectors, some of which were then further subdivided to arrive at a lower level classification with 52 sectors. The three main differences in the highest classification were:

1. The 1993 sector 'Education, social services and health' was split into 'Education' and 'Social services and health'.
2. The above sector was further differentiated into public and private provision.
3. The 1993 sector 'Other community, social, and personal services, and domestic services' was split into 'Other community, social, and personal services' and 'Domestic services'.

In all cases, given that the changes did not involve shifts between sectors, but only their subdivision, the procedure adopted was to reintegrate the sectors back into the 1993 division. This resulted in the following classification:

A. Agriculture, animal production, hunting and forestry
B. Fishing
C. Mining and quarrying
D. Manufacturing
E. Electricity, gas and water supply
F. Construction
G. Wholesale and retail trade
H. Hotels and restaurants
I. Transport, storage and communication
J. Financial intermediation
K. Real estate, renting and business services
L. Public administration and defence; compulsory social security
M. Education, health and social work
N. Other community, social and personal service activities; private household with employed persons

6.4. Method for imputing employment data

To impute total and sector-level employment from 2008 until 2015, three different procedures were adopted depending on the information available. The majority of sectors have data on the number of registered occupations during the period, which are used as the key estimator for the other categories. These are hereafter called 'standard' sectors. The second procedure was adopted for domestic services, using information form the EPH combined to the 2016-2017 national accounts. Finally, to estimate public employment, the EPH were used alongside the preceding and subsequent national accounts.

Sectors A through K were considered 'standard' sectors. For these, the procedure was to use the information for registered occupations (ro_{ht}) as the estimator for unregistered ($uo_{h,t}$) and non-employee ($no_{h,t}$) occupations between 2008 and 2015. The sum of these three categories equals total ($to_{h,t}$) occupations. In all cases, the subscript h refers to the sector and the subscript t to the year. The ratios between $ro_{h,t}$ and the other two categories are available from the national accounts for the 1993-2007 and the 20016-2017 period. It was assumed that ro_{ht}/x_{ht}, where x_{ht} equals any occupational group for sector h and time t, varied linearly during the unknown period. Formally,

$$x_{h,t} = ro_{h,t} * \gamma^{x}_{h,t} \ , \ 2008 \leq t \leq 2015 \tag{1.27}$$

where x_{ht} equals any occupational group for sector h and time t, and γ^{x}_{ht} is a simple linear interpolator for the occupations x (either unregistered workers or non-employees):

$$\gamma^{x}_{h,t} = \left(\frac{x_{h,2007}}{ro_{h,2007}} \right) * \frac{(2016 - t)}{9} + \left(\frac{x_{h,2016}}{ro_{h,2016}} \right) * \frac{(t - 2007)}{9} \tag{1.28}$$

Essentially, this assumes that labour formalisation in each sector progressed linearly between the periods for which there are data available (i.e. from 2008 until 2015). This is a simplifying assumption in two foreseeable ways: i) periods of higher national growth tend to stimulate labour formalisation throughout the economy, and ii) faster-growing sectors tend to increase their levels of labour formalisation above the global average. Nevertheless, this method is capable of retaining each sector's specificity, seen through the national accounts information that encloses the missing period, and adds dynamics through the sector-level information on registered employment.

Sector N 'Other community, social and personal service activities; private household with employed persons': This sector was split into two after 2004, with domestic labour becoming a separate account. Furthermore, the registered employment series (2004-2016) does not record domestic services. For the 2008-2015 period, it was thus necessary to impute

registered and unregistered occupations in domestic services,[140] as well as unregistered employees and non-employees for the overall sector. This was done by first estimating occupations in domestic services, then splitting the sector, and finally estimating the subsector that excludes domestic services in the same manner as the 'standard' ones.

For domestic services, information was drawn from the EPH and compared to that present for 2016 and 2017, the only period during which the National Accounts bring complete information for the sector. The ratio between the number of domestic servants in the EPH surveys[141] and in the latest national accounts was considered to be constant along time. Therefore:

(1.29) $$to_{ds,t} = \gamma_{ds}^{to} * to_{ds,t}^{EPH}$$

(1.30) $$\gamma_{ds}^{to} = \frac{to_{ds,2016}^{NA}}{to_{ds,2016}^{EPH}}$$

where the subscript ds refers to domestic services, and the superscripts EPH and NA refer to data taken, respectively, from the EPH surveys and National Accounts. In order to arrive at the yearly number of registered and unregistered workers, the degree of labour formalisation for domestic services was taken directly from information present in the EPH and used to divide total occupations into the two groups:

(1.31) $$ro_{ds,t} = to_{ds,t} * {ro_{ds,t}^{NA}}/{to_{ds,t}^{NA}} \;,\; uo_{ds,t} = to_{ds,t} * {uo_{ds,t}^{NA}}/{to_{ds,t}^{NA}}$$

The estimated number of registered and unregistered domestic occupations was then used to make the other series compatible.[142] By subtracting these values from the number of occupations for the 'Other services...' sector, in the 1993-based National Accounts, the resulting series for registered occupations became comparable to that available for registered employment over the 2004-2016 period and for the 2016-2017 Generation of Income account. One final adjustment was made, to multiply the whole registered employment series of this subsector by the ratio observed between it and that available in the 2016-2017 Generation of Income account (a ratio of approximately 1.2). It was thus treated as a 'standard' sector, as described above.

Sector M 'Education, health and social work': the 2004 system of National Accounts implemented two changes to this sector. It was split into 'education' and 'health and

[140] The classification considers that all paid occupations in domestic services are either registered or unregistered employees, there being no non-employees.

[141] As the National Accounts list the number of occupations, and not workers, each domestic worker in the EPH is weighted according to the number of houses in which she or he works.

[142] The total number of domestic occupations rose from about 800,000 in 2003 to 1,000,000 in 2006, and then oscillated around 1,100,000 until 2017. The share of formal occupations, on the other hand, steadily increased from 4 to 22% over the same period.

social services', and, within each, the public and the private provision were differentiated as subsectors. It is not possible to impute the share of health and of education in the 1993-based system, so for consistency they are treated as a single sector throughout the analysis (unless when referring to developments restricted to the later period). It is, however, possible to differentiate between the public and private dimensions. Public employment and value added are recorded only in sector L, which is entirely public, and sector M, which is partially public. There is, furthermore, information about total public employment and value added in the 1993-based national accounts, so:

(1.32) $$x_{\text{esh.pu},t} = x_{\text{tpu},t} - x_{\text{pa},t} \quad , 1993 \leq t \leq 2007$$

(1.33) $$x_{\text{esh.pr},t} = x_{\text{esh.t},t} - x_{\text{esh.pu},t} \quad , 1993 \leq t \leq 2007$$

where x refers to any employment category or value added; the subscripts esh.pu, esh.pr, and esh.t respectively refer to public, private, and total values for education, social services and health (M); tpu is the total public sector; and pa is the public administration sector (L).

The resulting subsector of private provision of education, social services and health is treated as a 'standard' sector.

In order to estimate employment in the public provision of education and health between 2007 and 2016, information from the EPH was used. Similar to the procedure adopted for domestic services, EPH data were the dynamic element in the calculations, adjusted by the ratio between the number of occupations in the EPH surveys and in national accounts. All employees were considered registered. Differently from domestic services, there is information for the subsector before 2008, so the ratio factor $\gamma^{\text{to}}_{\text{esh.pu},t}$ varies linearly along time as in the 'standard' sectors:

(1.34) $$ro_{\text{esh.pu},t} = to_{\text{esh.pu},t} = \gamma^{\text{to}}_{\text{esh.pu},t} * to^{\text{EPH}}_{\text{esh.pu},t} \ , \ 2008 \leq t \leq 2015$$

(1.35) $$\gamma^{\text{to}}_{\text{esh.pu},t} = \frac{to^{\text{NA}}_{\text{esh.pu,2007}}}{to^{\text{EPH}}_{\text{esh.pu,2007}}} * \frac{\left(2016 - t\right)}{9} + \frac{to^{\text{NA}}_{\text{esh.pu,2016}}}{to^{\text{EPH}}_{\text{esh.pu,2016}}} * \frac{\left(t - 2007\right)}{9}$$

Sector L 'Public administration and defence; compulsory social security': the same procedure described above for the public provision of health and education was adopted. The only difference is that national accounts already bring information for the sector until 2007, so it was not necessary to arrive at it by subtraction.

Finally, in order to arrive at total public, private and overall occupations, including their categories, the relevant sectors were added together. The public sector was estimated by summing the values for public administration and for the public provision of health and

education, whereas the private sector was the sum of all others. Total employment was the sum of the preceding two.

6.5. Remuneration data

Data on remuneration are even more fragmentary than for employment levels, as sector-level information on GOS is only present since 2016. Employee remuneration and mixed income are also available until 2007, however. Therefore, in order to decrease the uncertainty with estimations, the decision was made to evaluate the wage levels of the sectors in the two periods for which they are available. Given that massive changes in inter-sectoral relative wages are rare events, and furthermore considering that there are data for the initial years of the Kirchners' administrations and the immediately subsequent period, this is a sufficient assessment of the relative wages of the sectors.

6.6. Dealing with different base years for supply and demand by institutional sector and sectoral added value

The final issue to be addressed is how to link the monetary variables of national accounts produced according to different base years. For the demand and supply by institutional sector variables, this was done through the standard procedure of adjusting the deflator. With $y_{b,t}^{cu}$ standing for a monetary variable (GDP, household consumption, government consumption, investment, exports or imports) in current prices, measured according to base-year *b*, in time *t*, the linked series in current prices, $y_{L,t}^{cu}$, becomes:

$$y_{L,t}^{cu} = y_{1993,t}^{cu} \text{ if } t < 2004,\ y_{L,t}^{cu} = y_{2004,t}^{cu} \text{ if } t \geq 2004 \tag{1.36}$$

The implicit deflator for the linked variable, $y_{L,t}^{def}$, in turn equals:

$$y_{L,t}^{def} = \frac{y_{b=2004,2004}^{cu}}{y_{b=1993,2004}^{cu}} * y_{1993,t}^{def} \text{ if } t < 2004 \ ,\ y_{L,t}^{def} = y_{2004,t}^{def} \text{ if } t \geq 2004 \tag{1.37}$$

where $y_{1993,t}^{def}$ is the 1993-based deflator for *y* and $y_{1993,t}^{def}$ is the 2004-based deflator for *y*, both of which use 2004 as their base year. This adjustment then allows to build a linked series for real demand and supply by institutional sector.

One element that received different treatment regards the series for stock variations and errors (these two flows are presented as a single variable). The components of GDP were linked and deflated separately, and so was the series for total GDP. The difference between GDP calculated by the sum of its components (i.e. household consumption + government consumption + investment + exports – imports) and the series for total GDP, both in

current and in constant prices, equals this residual series of variations and errors. After arriving at the latter, it was then added into investment, so that the concept of investment used throughout the analysis encompasses variations of stocks (and errors).

For sectoral added value, however, it was not possible to link the series, for there were no compatible series whose ratio could be calculated. The issue is that the 1993-based national accounts report sectoral gross added value at producer prices, whereas the 2004 accounts report sectoral gross added value at basic prices. In neither of them were the necessary taxes discriminated, which could allow for compatible series to be built. The decision was then made to calculate sectoral labour productivity according to the two definitions, i.e. gross added value at (producer/basic) prices per occupation. The differences were mostly small, and in no case led to qualitatively different conclusions about the nature of the sectoral change Argentina underwent.

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